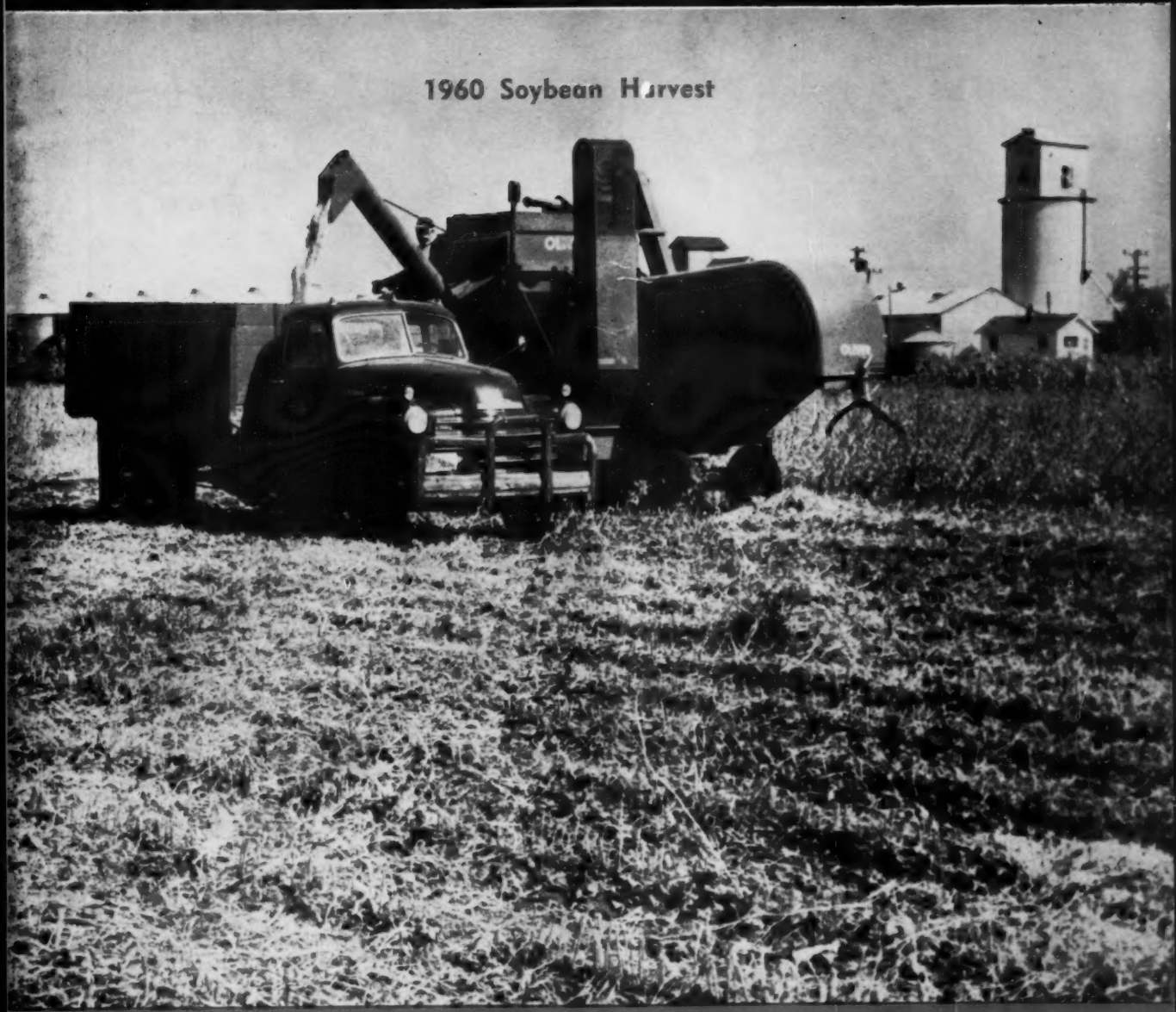
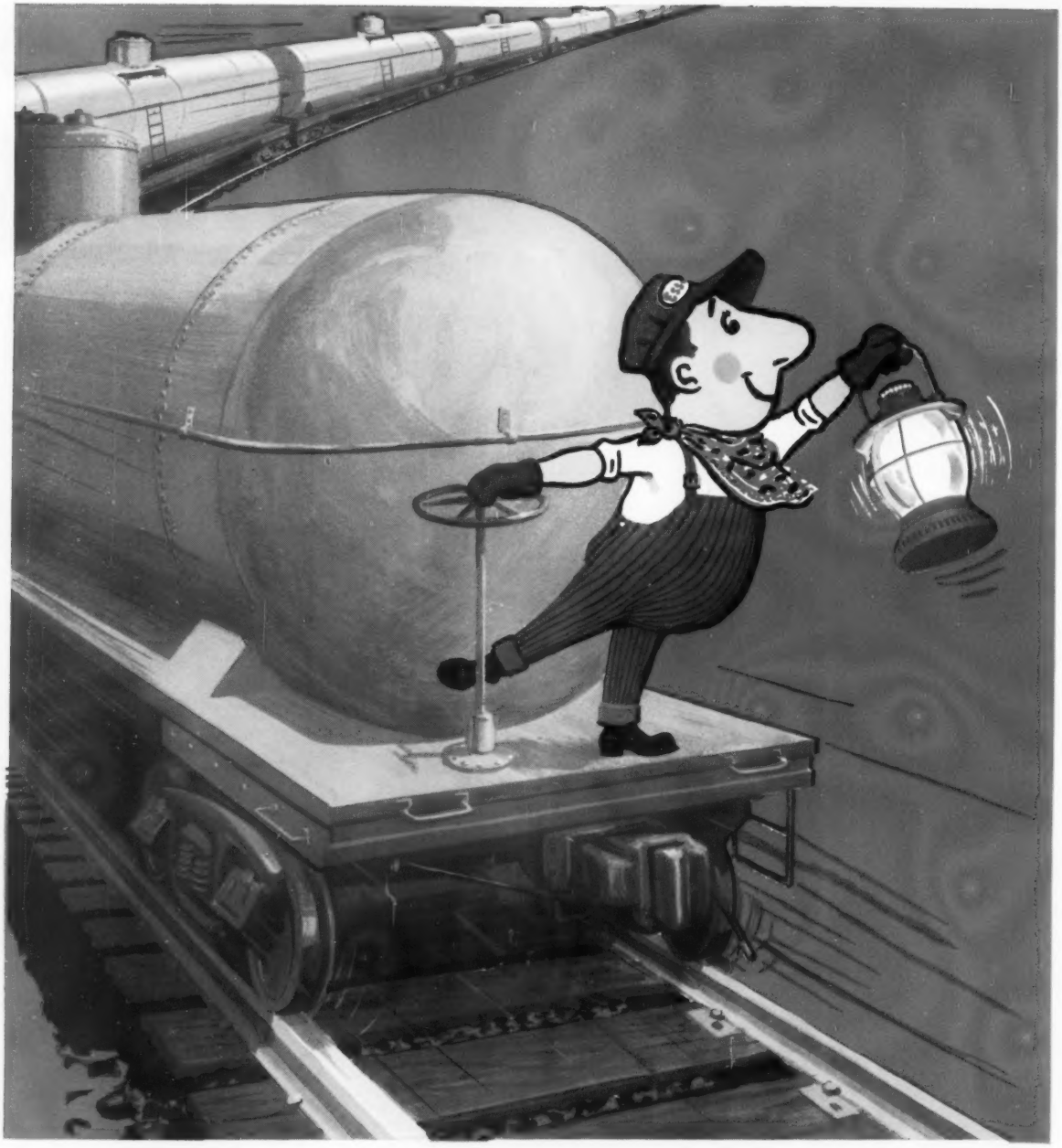
THE Soybean Digest



1960 Soybean Harvest

OCTOBER • 1960

VOLUME 20 • NUMBER 12



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THE SOYBEAN DIGEST

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Objectives of the American Soybean Association include the bringing together of all persons interested in the production, distribution and utilization of soybeans; the collection and dissemination of the best available information relating to both the practical and scientific phases of the problems of increased yields coupled with lessened costs; the safeguarding of production against diseases and insect pests; the promotion of the development of new varieties; the encouragement of the interest of federal and state governments and experiment stations; and the rendering of all possible services to the members of the Association.

EDITOR'S DESK

. . By GEO. M. STRAYER

1960 CROP ALSO OVER-ESTIMATED This is the season for the bulls and the bears. It takes both to make an active soybean market. Which side you are on determines your degree of optimism or pessimism.

Several times during the past year on this page I have called attention to my belief that the 1959 soybean crop was not as large, in bushels, as the official estimates would indicate. During recent weeks there have been many people looking for those millions of bushels that could not be located in the market place. Current figures on carryover indicate they have not yet been found. The regretable part is that these millions of bushels that did not exist were used to depress selling prices below those which would otherwise have prevailed. Soybean producers—the men for whom the U. S. Department of Agriculture supposedly works—were deprived of income rightfully theirs by the USDA crop estimates.

And several thousand miles of travel through soybean production areas during recent weeks have convinced me the same thing is true of the 1960 crop. Certainly there are some excellent soybean fields. There are also some mighty poor ones! And when you fly over fields through the Midwest and begin to add up the acres drowned out by wet weather in the spring and the acres planted so late they cannot possibly make anything other than very low yields, there seems to be possibility of the September crop estimate being too high again.

USDA now predicts more fluctuation in prices of 1960-crop soybeans than was the case on the 1959 crop. Based on the above I will agree with them on this prediction! Again I say—do not sell soybeans short at this time!

ENTERTAIN JAPANESE TRADE TEAMS Japan is our No. 1 customer for U. S. soybeans. Out of total exports now estimated at nearly 140 million bushels during the 1959 crop year closed on Sept. 30, Japan took over 40 million bushels.

Very significant is the tour of the soybean industry of the United States now being made by the team representing the Japan Soy Sauce Brewers Association. In Japan soy sauce is used as a seasoning agent, much as we use salt and pepper. It is consumed in tremendous quantities. Shoyu manufacturers are the largest users of soybean meal, as well as some quantities of whole soybeans.

This team, made up of the leaders of the shoyu industry, is visiting the production areas, observing harvesting, handling, marketing, grading, shipping and exporting of the crop. Past experience has shown this to be one of the very best ways of creating understanding of our ability to supply market needs.

Also in the United States at this time, under the auspices of the U. S. Feed Grains Council, is a Japanese feed team. Increased quantities of soybean oil meal will be used in Japan in producing livestock products, as the incomes rise and buying power will permit usage of animal products. Soybean processing and feed manufacturing using soybean oil meal as the basic ingredient were shown to them.

This type of activity is obviously a means of creating more markets for U. S. soybeans. It comes as a result of the activities of the Japanese American Soybean Institute being carried on by ASA and the Japanese trade groups, of which the Japan Soy Sauce Brewers Association is one of our most enthusiastic.

CCC STOCKS NOT LARGE FACTOR One year ago the carryover stocks of soybeans were a very important factor in the market. CCC stocks were the largest in history, and the sales policy announced placed the price at 20¢ above the support price in the area concerned, or at the market, whichever was higher. This policy was designed to insulate the CCC stocks from the market during harvest season, and ASA agreed to it. Unfavorable weather during harvest season, plus a smaller crop, siphoned off large quantities of these CCC stocks during the harvest season in spite of the intent of the announced sales policy.

Elsewhere in this issue is the announcement of this year's sales policy on CCC stocks. It, too, is designed to insulate these stocks from the market. But with less than 9 million bushels of soybeans in CCC hands, as compared with six times that quantity a year ago, CCC stocks will have very little effect on the market this year.

Likewise, should weather be inclement during the harvest season there will be no large carryover stocks to carry processor operations during the lull. Pricewise we are in a much more healthy situation than 1 year ago. CCC stocks cannot hold down market levels for long—they are too small.

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sions will not be too objectionable

A report on the National Soybean Crop Improvement Council advisory board before the American Soybean Association convention in Memphis

Row Spacing and Weed Control in Soybeans

By J. ROSS FLEETWOOD
University of Missouri

SOYBEANS as a crop are in much the same position as middle kids in a big family. As many of you know from experience the "in-between" youngsters have had to live on the leftover affection and attention of their parents, wear the hand-me-down clothes and play with the cast-off toys of their older brothers and sisters. Economic necessity made this a fact in many homes.

Soybeans came into the agriculture of this nation with the established crops such as corn, cotton and small grain already established. It was only natural that the baby crop was raised on and with the land, techniques, knowledge, and equipment already available for the older children. It was almost inevitable, therefore, that soybeans were grown in row spacing adapted to the planting and cultivating equipment available. As my friend Dr. C. R. Weber of Iowa often says they were even harvested by a combine designed for other crops.

In the early days when their volume was small this was no serious handicap, but as they assumed a bigger and bigger role in the total farm economy high yields assumed importance. We do grow 150 or more bushels of corn per acre, three or more bales of cotton and 60 or more bushels of wheat. Why not 60, 70 or more bushels of beans per acre?

It has been known for many years that closer spacing of rows often did give higher yields in soybeans. However, when yields were low the small percentage increase hardly seemed to justify new methods or equipment. At least no serious or long sustained effort has ever been made to secure the adoption of such changes. Have times changed?

The first topic of the Council at this year's session was to reassess the problem of row spacing in soybeans. Dr. J. W. Pendleton and Dr. J. W. Lambert, of Illinois and Minnesota, presented recent data to show that present-day varieties would give an increase for spacings around 20 to 24 inches as compared to the common 36-to-40-inch spacing. These data were substantiated by the reports from many of the other states in the Cornbelt.

Dr. Edgar Hartwig of the UDSA reported that data in the southern portion of the soybean belt indicated closer spacing did not necessarily give higher yields. Dr. R. E. Frans of Arkansas and Dr. H. T. Rogers of Alabama reported that in their states where weeds were controlled, closer spacing did give higher yields.

Chemical Control

I would like to leave our conclusions for just a moment and take up our second topic. Either by the very intelligent design or extreme good luck of Ward Calland our second topic fitted in beautifully with the major problem raised by closer spacing, namely weed control.

Dr. W. C. Shaw, ARS, USDA, Beltsville, Md., gave us a very good rundown on chemical weed control. I found it rather difficult to summarize his rapid flow of highly technical terms and highly complicated and hard to pronounce chemical names. Since I doubt if you could understand or pronounce them either I will simply say that he said:

1—Weeds do make a big contribution to the cash cost of producing soybeans.

2—No presently available chemical is entirely satisfactory and safe for use either as a pre- or post-emergence spray on soybeans.

3—However, like Mr. Hoover's prosperity, such a chemical is just around the corner. Some new chemicals are showing much promise. Amiben is one of these and others of the benzoic acid materials could be what we are looking for.

4—He pointed out that basic research on how the various chemicals act on plants and how the various plants act on chemicals as proving an important key as to how to make certain chemical changes to secure more satisfactory results and extend the usefulness of many chemicals.

5—Finally, he discussed the problems faced in using various chemicals safely in cropping systems involving various crops and chemicals.

6—I believe he did say something about needing some more money for his project.

Dr. W. R. Paden of South Carolina gave a progress report on the work there in connection with double-cropping. He stated that nearly three-fourths of their soybean acreage was double-cropped, mostly with small grains. He further stated that the trend now is to reduce this and grow more beans alone. His reasons:

1—Timing problem.

2—Lower yields of both crops plus the higher labor and other costs.

3—Increased disease and insect problems in both crops where grown on the same land continuously.

4—Lack of specific equipment to do the job of preparing a seedbed in the straw left after combining the small grain—BURN THE STRAW.

Some Conclusions

Up to this point I have confined myself to as nearly a reporting job as I could. From here on I would exercise some editorial license. However, I hope the following conclu-

sions will not be too objectionable to my colleagues on the Council:

1—Where weeds can be controlled closer row spacing with near normal spacing of plants in the row will give a yield increase near 10%-15%. The returns will probably be higher and more consistent in the northern area and decrease in the southern area.

2—Since present chemicals are expensive and not entirely satisfactory cultivation will be necessary to control weeds. Therefore, the farmer will have to decide whether his operations are large enough to justify shifting to closer spacing if it requires more time or new equipment.

3—The program carried out in Illinois this year does indicate that many farmers are willing to give closer spacing a trial at least. Pendleton reports they intend to survey at least a portion of this year's new participants in order to more accurately assess their reactions to this method.

4—If we can get a successful, economical, and near full season weed control chemical it seems likely that farmers will adopt close drilling of soybeans. Present indications are that this would seldom decrease yields materially and in some areas would rather consistently give a significant increase in yield with very little added cost and a lower labor load.

Research into Surplus Uses Will Take Time

RESEARCH into greater industrial uses for farm products is one key to breaking down giant agricultural surpluses.

But it's wishful thinking to believe that research started now can find economic and new uses for all the grain presently stored under government loan, explains R. T. Milner, head of the University of Illinois department of food technology.

Milner points out that, in the past, highly publicized "myths" about possible industrial farm product uses have stirred the public's imagination, only to fall through when actually tested. Early dreams of soybean plastics is a classic example.

It's mainly a matter of economics, Milner explains. At present, soybean prices are too high to offer a strong argument for their use in industry.

Until industry can count on at least 50¢-a-bushel soybeans, it will be difficult for them to compete favorably with low-cost competitors.

Right Equipment Spells Profits For Newton Co.

TO TAKE advantage of the booming soybean trade on the Delmarva peninsula, O. A. Newton & Son Co., Bridgeville, Del., buys soybeans direct from growers and sells to export brokers and soybean processors. Because their flat storage buildings and elevator are usually loaded with corn, they carry on a fast-moving operation. Beans are taken from farmers' motor trucks and transferred directly into a boxcar or a customer's truck, with no storage time in between.

Obviously the key to the success of an operation such as this is the ability of the grain transferring equipment to keep the grain moving at a rapid pace.

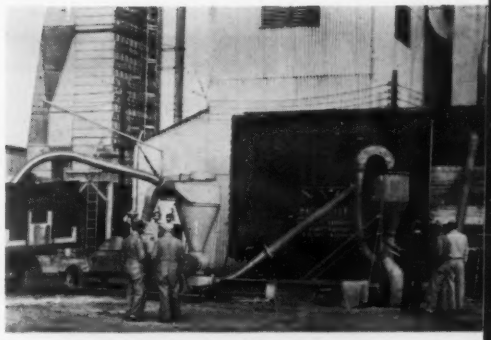
In 1958, the company missed out on the Eastern Shore soybean business because their facilities were already overtaxed with corn. Last year, determined to reenter the bean business, they looked around for the kind of equipment that could be used profitably in a direct-transfer operation.

"What we needed," said John C. Hammond, vice president, "was a mobile, self-powered machine with high grain handling capacities. We found what we wanted in a Model 3000 Vac-U-Vator made by Dunbar Kapple, Inc.

"Except for 1958, we have provided a direct farmer outlet for growers in this area for many years. We take beans from farmers' trucks as they come in from the harvest. They are unloaded from the truck by the Vac-U-Vator, loaded directly into waiting boxcars or our customers' trucks, and shipped out immediately. We don't tie up expensive storage facilities, the farmers get rid of their crop immediately, and our customers get quick service."

The Model 3000 Vac used by Newton will move material at the rate of 3,000 bushels per hour, and up to 500 feet away. During the harvest season, Newton handles as much as 50,000 bushels in a week's time.

Basically, O. A. Newton & Son Co. is a poultry feed manufacturer.



At O. A. Newton & Son Co., Bridgeville, Del., farmers can unload soybeans from trucks immediately. Vac-U-Vator, made by Dunbar Kapple, Batavia, Ill., is used to unload. The machine can empty a truck in a matter of a few minutes' time, so the farmer does not have to wait.

They buy corn for their own feed business, and store it for later use. Only the excess is sold.

Their emphasis on the soybean business is a reflection of the growing importance of soybean production in their area. Over 8 million bushels of beans were grown on the Eastern Shore in 1959. Over the past 10 years, bean production has steadily risen. This rise has been stimulated by the increased local use of Vac-U-Vators, which have provided farmers and grain dealers with a flexible, efficient system for handling the bean crop.

Many farmers alternate their land between beans and corn, a practice that not only provides a sound crop rotation plan, but saves them fertilizer costs as well. The typical procedure is to fertilize land heavily, then plant corn. The following year, beans are planted. Little or no additional fertilizer is laid down, yet yields are good.

"Two factors work to enable us to give growers a better price for their crop," said Mr. Hammond. "Demand for beans has been stronger during the past year, which has improved market conditions. In addition, since the Vac-U-Vator lets us operate without tying up expensive storage facilities, we cut our operating costs. Both benefits are passed on to the farmers."

Solvent Plants in China

COMMUNIST CHINESE press reports state that more than 30 large oilseed processing plants in Mainland China are now producing edible vegetable oil by solvent extraction instead of pressing, and that the number of such plants will increase.

Florida's Soybean Research

Florida has a small area of intensive production, may soon have a variety adapted statewide

By RICHARD C. ORR
Assistant Editor,
Florida Agricultural Experiment Station

DR. KUELL HINSON checks a plot of excellent Florida soybeans.

AFTER 10 YEARS of regional testing and several years of breeding work, Florida may be on the verge of a soybean variety adapted to statewide production.

Dr. Kuell Hinson, geneticist with the U. S. Department of Agriculture, has been cooperating with the Florida Agricultural Experiment Station on the soybean project since 1955. To aid Florida in this program, Dr. Hinson brought early generation breeding material with him to his new assignment.

From the original material Florida now has approximately 30 breeding lines which have been tested extensively, any one of which is more desirable in one or more traits than varieties now available.

The big problem ahead is to determine which lines have the most to offer as varieties. One in particular has shown great promise for conditions in peninsular Florida.

While the original line will not be acceptable because of mixed flower color, a selection from this line is likely to meet the demand for a higher yielding variety of later maturity.

Another promising breeding line may prove valuable on a regional basis as well as in the state. Still another breeding line may be adapted from the Gainesville area north into other regional areas.

According to the geneticist, the optimum situation would be to have at least two varieties for each area of the state, one earlier than the other. This would enable more Florida growers to fit soybeans into their cropping program.

For example, a later maturing variety may make it possible for a grower to plant soybeans following a watermelon crop on his better land, thus obtaining two crops in 1 year.

Florida tests are conducted primarily at Gainesville, Live Oak, Zellwood and Homestead. If a breeding line looks promising it is put into a regional testing system. This regional program is coordinated at the Delta Experiment Station in Mississippi. Regional testing involves 20 or 30 test sites throughout the Southeast.

Dr. Hinson is also responsible for testing breeding lines developed in other areas. The ultimate goal is to find a variety that will perform well in all areas of the South.

Main objectives in the search are good height and later maturity, good yield, disease resistance, seed holding qualities and satisfactory chemical composition.

Yields now average a little over 23 bushels per acre. At the current market price this means an income of about $46 to $50 per acre. "While this is not bad in comparison with field crops other than tobacco," says Dr. Hinson, "we hope to improve the situation."

Disease resistance and chemical composition are two major factors in the search for improved varieties. Target spot, a disease affecting the leaves and eventually the yield, is one major disease problem. It is becoming more and more common in Florida.

Better breeding can overcome disease problems, as has been shown in the case of bacterial pustule, a former problem now bred out of leading lines.

The chemical composition program is one for the future. In the past, and even today, major emphasis was placed on the oil content of soybeans. Crop experts and economists feel that oil crops may become surplus in the near future due to the large number of them.

The other major content of soybeans is protein. With increasing population and more emphasis on proper diets, experts feel there may be a shortage of protein crops.

Future breeding will probably be aimed at increasing the protein content of soybeans while placing less emphasis on the oil content. Dr. Hinson says leading lines now yield about 40% protein. Improved breeding may raise this to 50%.

Variety testing in Florida began on a small scale in 1949, under the regional program. There are now about

144 breeding lines plus check varieties undergoing regional testing in Florida.

In addition there are nearly 400 lines, developed in Florida, being tested each year in the state. Nearly 250 of these are being tested in two or more locations. Approximately two-thirds of the total lines are replaced each year by new breeding lines.

With Florida nearing the day when it will have a good performance variety, more effort will be put into breeding techniques. This means more study will be made of the basic steps needed to produce a given requirement.

As conditions change, such as a variety no longer being disease resistant, the data would be on hand to facilitate a certain type of breeding. This would enable scientists to make a needed change in a hurry without going through the whole breeding process again. This will become more and more of Dr. Hinson's work.

Working with Dr. Hinson on the preliminary testing program are members of the Florida Agricultural Experiment Station. Included are John C. Noonan, Sub-Tropical Experiment Station, Homestead; H. W. Lundy, Suwannee Valley Station, Live Oak; and Dr. W. T. Scudder, Central Florida Station, Sanford.

New Plastics Produced From Soybean Oil by USDA

NEW PLASTICS that will not dissolve or melt and that adhere strongly to glass have been produced in chemical research on soybean and linseed oils at the U. S. Department of Agriculture laboratory in Peoria, Ill. And the plastics were made possible by a new method of crosslinking certain chemicals, called "polyester resins."

Everett H. Pryde

Polyesters have a wide variety of uses. They are well known as synthetic textile fibers and high-strength, water-repellent films. They are easily worked into desirable shapes, and after they are crosslinked they will cure or harden and resist further change. In crosslinking, chemical unions or links are formed between chains of carbon atoms in a substance.

Crosslinked polyesters are used as rigid foams, electrical insulation, and with reinforcing fillers, as fabricating material for boats, pipe and ducting, luggage, and furniture.

In the new method of crosslinking polyesters, developed at the Northern Utilization Research and Development Division, a nonoxidative catalyst is used. Older methods are carried out under oxidative conditions.

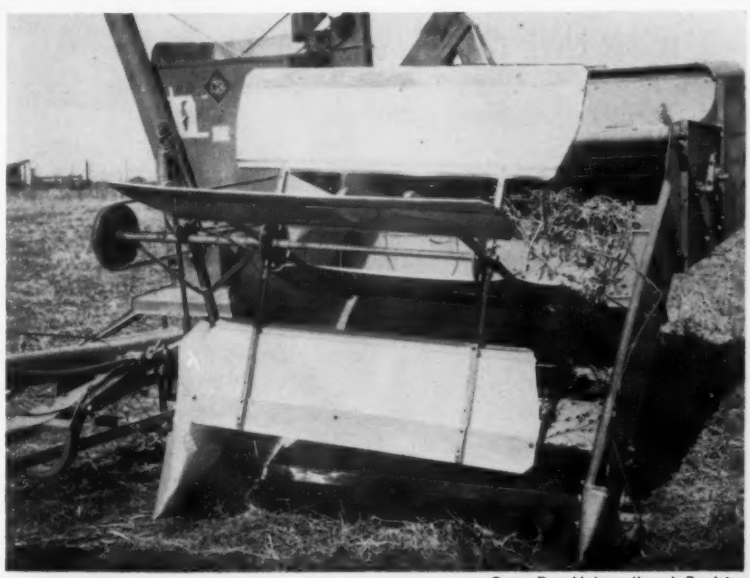
Controlling the crosslinking by adjusting the amount of chemicals, E. H. Pryde and R. A. Awl obtained resins with different properties. Some of the resins showed "remarkable adhesion to the glass of the reaction flasks," Dr. Pryde reported in a paper before the American Chemical Society. The adhesion was so great that the Northern Division chemists suggest there was molecular combination between the resins and the glass surface. The new plastics, like other crosslinked polyesters, will not melt or dissolve before they disintegrate.

Dr. Pryde and Mr. Awl, organic chemists, and H. M. Teeter, investigations leader, demonstrated the crosslinking reaction with a polyester obtained in a new line of research on treating soybean and linseed oils and their component fatty acids with ozone, a form of oxygen. In work directed by Dr. Teeter, Northern Division chemists developed new procedures for treating methyl oleate with ozone. Methyl oleate is made from oleic acid, a component of vegetable and animal oils. The new procedures produced high yields of pure aldehyde products.

One of the products is methyl azelaaldehydate, which is not available commercially probably because present methods of production are considered too expensive. The purity and high yields of the Northern Division procedure plus the versatility of the aldehyde products as intermediate chemicals show industrial potential. The new plastics, in the laboratory production of which methyl azelaaldehydate was used as an intermediate chemical, illustrate the potential. Methyl azelaaldehydate and pentaerythritol, a chemical used in the plastics industry, were reacted with other chemicals to produce the new polyesters, and they were crosslinked to produce the plastics. Intermediate chemicals in the form of acids related to the aldehyde products now are produced commercially by ozonolysis of oleic acid.

The Northern Division's high-yielding aldehyde procedures, therefore, open a new line of research that should shorten the route from oils of farm origin to new products for industry.

Keeps Weeds off Reel



—From Des Moines (Iowa) Register

THERE'S BEEN less trouble with weeds and soybean vines wrapping around the reel of the combine for Jon Kneen, Mt. Union, Iowa, since he bolted sheets of metal roofing to reel slats on the combine. He not only has fewer stops but saves more grain. Aluminum is not used because it is too soft.

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THE NEWS IN BRIEF

THE CROP, MARKETS AND OTHER ITEMS OF NOTE

Soybean Harvest Is Late

As of Oct. 1 there was still no heavy movement of the 1960 soybean crop. Combining was most advanced in Kansas, 25% to 30% out of the field; Illinois, 25% out; Missouri, under 20%; and Indiana, under 10%. Last year at the same time the crop was 50% harvested in Illinois and 40% in Indiana.

Some soybeans had been harvested in western Iowa, Minnesota, North Dakota, Nebraska, Arkansas and Tennessee, and Ontario but the main harvest movement was still to come. (For more complete earlier details on the crop see page 23.)

George E. Spain, agronomy extension specialist, North Carolina State College, Raleigh, writes that some county agents estimate county average yield losses of about 3 bushels per acre due to damage from hurricane Donna in the North Carolina area of intensive soybean culture, with the possibility of quality deterioration depending on subsequent weather. "We're still hoping that a fairly favorable harvest season will see a good yield of soybeans harvested out of North Carolina." Most North Carolina crop reporters describe the crop as good or very good.

Storage May Be Profitable?

Farmers may find it profitable to store soybeans if this year's crop is smaller that USDA's estimate of 566 million bushels as of Sept. 1, says T. A. Hieronymus, University of Illinois grain marketing specialist.

Dr. Hieronymus says a total estimated supply of about 590 million bushels might mean a price drop of a nickel to around $1.95 at harvest time. But he points out USDA's Sept. 1 yield prediction was made before the September hot spell. If the crop is considerably smaller than the estimate, a **fairly large price increase is likely next spring.**

Commercial Storage Short

Commercial storage space apparently will be more of a problem than in recent years in northern states and the Midsouth. Glenn Pogeler, North Iowa Cooperative Processing Association, Mason City, says storage space will be crowded as elevators are not holding as much space for soybeans as last year.

Quoting Leo C. Lester, Worthington, Minn.: "It is going to be a problem to find enough storage although farmers are emptying bins." Dixon Jordan, Standard Commission Co., Memphis, Tenn., says commercial storage and handling facilities are not entirely adequate and that some beans will have to be sold at harvest.

J. E. Johnson, Champaign, Ill., reports advance selling in his area has not been heavy. Most advance selling has been found where crop yields were low last year, he says.

White-Fringed Beetle

The white-fringed beetle, which feeds on more than 500 plants including soybeans, has been found at Blytheville and Jonesboro, Ark., for the first time, according to newspaper reports. An intensive control program is under way. Controls for corn earworm have been applied to soybeans in Arkansas and Virginia and for fall armyworm in Arkansas.

Reports on Fats, Oils Exports

Western Europe's net imports of fats, oils, and oilseeds in 1960 are forecast at almost 4.3 million metric tons, oil or oil equivalent, **about 8% higher than net imports in 1959,** USDA's Foreign Agricultural Service reports.

USDA on Sept. 27 announced authorizations to Pakistan, Taiwan and Spain to finance purchases of $23,442,000 worth of soybean oil and cottonseed oil under P.L. 480.

The purchase authorization to Pakistan was for $6,422,202 or about 22,300 metric tons of vegetable oils under a supplemental agreement issued

last Apr. 11. Sales contracts made between Oct. 5 and Feb. 28 will be eligible for financing, with shipment to be made between Oct. 5 and Mar. 31.

The authorization to Taiwan or Nationalist China was for purchase of $400,000 worth or about 1,450 metric tons of oil under an agreement of last Aug. 30. Contracts made between Oct. 5 and Feb. 28 will be eligible for financing, with shipment to be made between Oct. 5 and Mar. 31.

The authorization to Spain was for purchase of $16,620,00 worth or about 73,500 metric tons of oil issued under an agreement announced last June 30. Contracts made between Oct. 5 and Nov. 30 will be eligible for financing, with shipment to be made between Oct. 5 and Dec. 31.

USDA announced agreements for purchase of vegetable oils with India, Ecuador and Korea during September. A supplemental agreement was signed with India to finance sale of $1 million worth of soybean oil (approximately 8.8 million pounds) for rupees under P.L. 480, the commodity to be made available under the U. S. Food for Peace program.

USDA also announced an agreement with Ecuador for sale of $1 million worth or about 7.7 million pounds of edible vegetable oil for Ecuadoran currency, under P.L. 480, purchase authorizations to be announced later.

USDA announced a supplemental agreement with Korea providing for the sale of $870,000 worth of cottonseed oil or soybean oil under P.L. 480. The oil, about 5.7 million pounds, will help Korea meet its food needs.

USDA announced issuance of an authorization to Israel to finance purchase of up to $1,035,123 worth of cottonseed oil or soybean oil, about 3,500 metric tons, under P.L. 480. Sales contracts made between Sept. 15 and Nov. 30 will be eligible for financing, and shipments may be made between Sept. 15 and Dec. 31.

USDA announced issuance of an authorization to Poland to finance purchase of up to $7.5 million worth of cottonseed or soybean oil, about 27,000 metric tons, under P.L. 480. Sales contracts made between Sept. 20, 1960, and May 31, 1961, will be eligible for financing with shipments from U. S. ports between Sept. 20 and next June 30.

The possibility of **fats and oils being added to the list of commodities available to church and charity groups for overseas relief feeding purposes** has been discussed in Washington with White House and USDA officials in recent weeks by Howard L. Roach, Soybean Council president, and Geo. M. Strayer, the Council's executive director. A favorable decision is expected shortly.

Walter Scott Passes

Walter M. Scott, Jr., Scott Plantations, Tallalah, La., died Sept. 25 in a Vicksburg hospital from burns suffered in a gas explosion in his office Aug. 31. Funeral was Sept. 27. Mr. Scott, a prominent Louisiana farmer and a leading Midsouth soybean grower, had been a director of the American Soybean Association since 1957. He operated Scott Plantations in partnership with his father, Walter M. Scott, Sr., until the latter's death a few years ago, and with his cousin, Warren S. Patrick.

The staff of the National Cottonseed Products Association is planning a comprehensive survey of the current and potential market for cottonseed oil. The study is designed to provide needed data on current and potential consumer uses, and the promotion potential that may exist for each use.

Each soybean processing plant and refinery has received from J. E. Thigpen, chairman of the fats and oils defense planning committee, a form requesting information for use in defense planning. The early completion and return of this form will be appreciated by USDA.

A statement showing percent of stinkbug damage in soybeans may now be included on any certificate of grade when requested by the applicant for inspection, B. W. Whitlock, director of the grain division, Agricultural Marketing Service, USDA, has announced.

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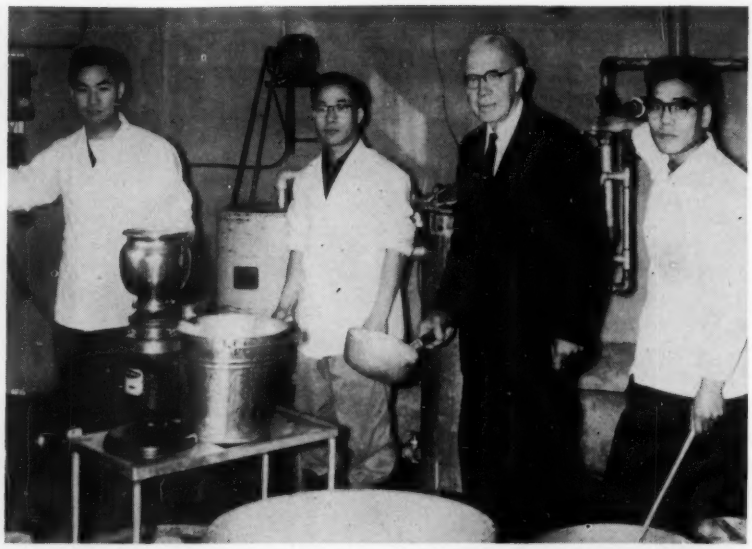


SOY MILK package plant. Behind Dr. Miller (third from left) pressure cooker; between two men at left, centrifuge; and in front of them, a small homogenizer; grinder not shown.

Small soy milk shops offer great possibilities for improving diets of Asiatic people

The Package Soy Milk Shop

H. W. MILLER, M.D.
Director Emeritus International Nutrition Research Foundation

THE ASIATIC people are becoming fully aware of deficiencies in their diets and are seeking for improved nutrition, particularly of that all important protein needed to balance the menu. Sometime over a quarter of a century ago my first contact with soy milk was made in Shanghai, China. There has been continual study as to how this important vegetable milk may be made available on a large scale to the people of Asia.

World War II and the general unsettled conditions in China and other parts of the Far East have greatly disrupted progress in developing soy milk plants in the Orient. However, during these years great progress has been made in the United States in research on soy milk in infant feeding and adult nutrition, also in manufacturing techniques, to the extent that soy milk is widely marketed in America both as a powdered milk and an evaporated soy milk.

The demand for the product has been mostly from those allergic to animal milk and through prescription to those who cannot tolerate dairy products. Its manufacture, however, has been by large factory establishments. This is the case with Loma Linda's Soyalac, Borden's Mull-Soy, and Mead Johnson's Sobee. The latest soy milk is being put out by the Indonesian soy milk plant located at Djorgakarta which began soy milk powder production in 1957. These plants have contributed much to the knowledge of soy milk, and emphasized its value as a dietary article.

Meager Distribution

The soybean has been used for centuries as a cheese curd. Now, however, its greater use as a nutritious beverage for young and old has been substantiated by much scientific research fostered by the International Nutrition Research Foundation of Arlington, Calif.

However, as yet this important nutrient has very meager distribution for the great masses of population needing a milk beverage in Asia. The large factory has distribution problems in Asia beyond the confines of the city where located. Also the price is often on a level with imported milks, and therefore out of reach of the classes that need it. Containers are another problem of cost.

Soy milk need not be expensive, and should be possible to supply within the economic range of the poorer people who need protein. In many parts of Asia soybeans are on the market, and can be grown. They are indigenous to several East Asia countries. The cost of soybeans figured in the equivalent currency of U. S. dollars ranges from 6¢ to 10¢ per pound. From 1 pound of soybeans of good variety the entire protein requirement and half the oil needed can be extracted to make a gallon of soy milk, to which a little added oil and sugar, together with vitamins which cost little, complete the same formula as cow's milk. The

cost should run from 3¢ to 5¢ a quart for freshly made soy milk at the package plant, where there are no distribution costs involved.

In Asia and bordering the South Sea Islands will be found the most ancient of nations. Here people have been self sustaining for centuries, not depending on transportation to bring them food. They supply to almost as great an extent the fabrics for clothing and other articles of life. These lands are made up of farmers and little shopkeepers, so we should look to small shops for processing milk and cheese foods that will be inexpensive and readily available. While in American and European countries we have large cheese factories, still the major portion of dairy products consumed are pasteurized and marketed by creameries in every town and community.

Tofu Shops

Soybeans are used extensively in many countries in the form of bean curd called tofu. To make this they use stone mills and simple cooking arrangements which are to be found in numerous little shops. In some places local delivery of the tofu is made, but for the most part people come to the little shops where the beans are cooked and the cheese made, and they buy their daily portion. The overhead of such shops is low so that the product is sold, as is most of what is consumed by Orientals, at little above the cost of the raw materials.

For the babies, children, and aged and weak, and even the laboring class, soy milk supplies a readily prepared easily digested nutrient that does not require home cooking. While soy curd is helpful in the Oriental diet, soy milk is most suitable for the young and those of weak digestion.

What is the package soy milk plant that can be installed at a cost of less than $2,000? It consists of a steam boiler or steam generator of from 5 to 10 horsepower capacity, this being the most costly part of the plant. This boiler that can be fired with oil, coal or wood can be set up anywhere. There are few places where the human race lives today that electricity is not available, and water is always an essential to human life.

A good variety of soybeans is desirable and, whether grown locally in Asia or imported, the beans are mostly of the good varieties. The beans are cleaned, washed, and picked over. Spoiled beans taint the milk. Plenty of labor is usually available for the picking operation. They are then put to soak for from 6 to 8 hours in cool water. Suitable mills for grinding the hydrated beans, either hand-operated stone mills or better a mill run by electric motor with steel or carborundum buhr, grind the beans under a small drip of water into a mush-like slurry of a milky color. This when properly diluted and agitated is placed in a steam kettle cooker capable of holding pressure.

A 50-gallon-capacity pressure cooker is the next essential. When this cooking is completed, heavy filter bags are used to separate the fiber from the milk. The filter bag is inserted into a large tub sitting next to the cooker, and the top of the filter bag is secured to a pipe leading from the bottom of the cooker so that the entire contents of the cooker are discharged by the pressure of steam.

Now we have a fiber-free milky liquid, the contents of which represent 80% of the protein, and 50% of the oil content of the original beans used, plus some soluble carbohydrate, minerals and vitamins found in the beans. The fiber is pressed quite dry by means of a hand operated press, or in some cases a pole is operated by one end attached to a post, and pressure is made on the bag over a slatted board by the weight of the operator sitting on the long end of the pole.

Thus the cooked soy milk is separated from the cooked extracted fiber, the latter containing the residue of nutrients that did not go into the milk. The residue is useful as stock feed, or it may be sun dried and used as poultry feed. Mixed with flour this makes a good bread or biscuits.

Milk Formulation

The milk can be coagulated if tofu is desired. However, it is now ready for the formulation of milk. The ingredients needed to constitute it to the formula of either dairy milk or human milk are measured out—so much sugar for the carbohydrate portion, so much oil to bring the fat content up to the desired amount, salt, calcium, and vitamins. These are placed in about one-fifth the desired quantity of extracted milk and run through a small homogenizer especially made for the package plant. When it is homogenized it is added to the other four-fifths of the milk, and we have it as a constituted milk of a nice color and good flavor.

In most places this soy milk is used hot and marketed at once as hot milk. However, where it is bottled (as is customary with animal milk) it is run over a cooler and bottled which adds a little expense.

The package soy milk plant has a capacity for 150 pounds of cheese curd, and 200 gallons of milk per day of operation, using three trained workers, also at a very minimum of cost.

Plant 30 Years Ago

The practicability of such package soy milk and cheese plants has been amply demonstrated. In fact, my first beginning with soy milk was made in a rather crude package plant at the Shanghai Sanitarium some 30 years ago. This grew into the large soy milk factory later in Shanghai. The next one, which was more streamlined, was put in a school at Taipei, Taiwan, supplying the school, the Taiwan Hospital and community with soy milk daily.

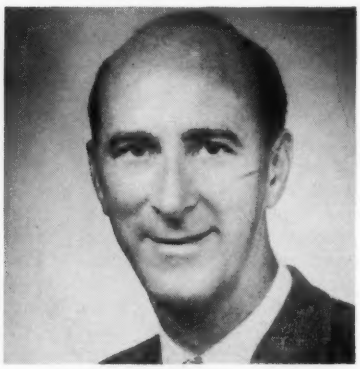
One year ago the writer had the satisfaction of arranging a flow line of the above described equipment in a village in the northern suburbs of Tokyo, where soy milk is made in a soy cheese factory so both bottled soy milk and tofu are supplied to the community and also to a state institution. There are an estimated 3,000 soy curd plants in Japan. At little additional cost each of these can be transformed into soy milk producing shops.

A soy milk package unit has been assembled at Mountain View College, located in central Mindanao, Philippine Islands. Here the college farm raises a good type of edible soybean. There 700 students get soy milk for breakfast every morning and at noon have soy cheese. In these rice eating and corn producing areas the soybean thus prepared has made a great contribution to the health and welfare of the student body and faculty members.

A similar package soy milk shop is now being installed at a school in Hong Kong, another at a college and hospital at Bandung, Indonesia, and another at a college in Japan.

Thus a partial solution of the all-important protein in the nutrition of the Orientals, within their economic reach, is now a possibility. No greater benefit can be visualized than nutrition adequate for infants and the growing school child.

From a speech before the American Soybean Association in Memphis, Tenn.



The Organization of Ontario Growers

By K. A. STANDING

Secretary-Manager, Ontario Soybean Growers Marketing Board, Chatham, Ontario

CANADA produces 7 million bushels of soybeans almost entirely in the Province of Ontario bordering the states of Ohio and Michigan.

Canada imports 15 million bushels of soybeans from the United States, double her domestic production plus 6 million in the form of soybean meal.

The production potential for soybeans in Canada is not very great due to the relatively small area to which soybeans are adapted. Probably all of the present requirements for Canada could be produced but due to growers' preference and normal crop diversification, the full requirement for the domestic market is not likely to be met in the near future.

Canada has been traditionally deficient in edible fats and protein meals. Our agricultural development parallels that of the United States, but in most fields on a much smaller scale.

There are 15,000 soybean growers all of whom are members of the Ontario Soya-Bean Growers' Marketing Plan under provincial and federal legislation.

In Ontario there are 23 marketing boards for agricultural products brought into being by a vote of a majority of the producers—usually 65%. The vote is conducted by the provincial government and determines whether or not the marketing plan will be put in force. A board of directors is elected by districts and these directors hold office for 1 year. Their task is to carry out the wishes of producers in many fields.

As I have just stated, our grower directors hold office for 1 year only. Each year the growers in each of six districts (representing approximately a million bushels of production) meet to elect district committees who in turn elect board members on the basis of production and number of growers. Every board member elected must be a producer in the district for which he holds office.

Powers granted under legislation. Every grower is registered with the marketing board.

Every buyer is licensed.

Board may inspect premises of buyers.

Board may stimulate, increase and improve the marketing of soybeans by any means it deems proper.

Board has power of negotiation with trade, re: prices, discounts, terms and conditions of sale or contracts.

Finance. Under the legislation, each grower has deducted from the selling price of his soybeans a fee, at present ½¢ per bushel, which is forwarded by the buyer to the board office with a record of each grower's name, address and number of bushels sold.

The funds so collected are trust funds subject to government audit and may only be increased by government action or a vote of the producers.

Activities of Board

Transportation. The board has conducted transportation studies and has been influential in having rail rate adjustments made and new truck rates established. At the present time new rail rate negotiations are under way.

Storage. A survey of existing storage facilities and their adequacy has been made by the board with a subsequent proposal for development of facilities which may eventually be built and owned by the producers themselves.

Present storage facilities for Ontario production of grains are entirely inadequate. New storage is not being built because no government program exists whereby government grain will be stored in commercial houses thereby guaranteeing a constant revenue. Under our legislation producers could vote to have a checkoff made for the construction of public space, owned and controlled by producers.

Market development. The growers' board was the first exporter of soybeans from Canada. This resulted in a continually expanding export trade in soybeans to Great Britain where Canada enjoys a preference in that Canadian soybeans enter the U. K. duty free.

This may sound like a contradiction, when our production is so far short of our requirements. However, your soybeans enter Canada duty free but enter the United Kingdom subject to a 5% duty, so that actually we are making a market for American soybeans every time we export ours and replace them with U. S. soys. Transportation costs also play a small part, or at least have in the past, in our movement of soybeans to the United Kingdom.

Soybean meal is also exported from Canada to the U. K. under British preferential tariff arrangements duty free while meal from non-Commonwealth countries is subject to a 10% duty. Hence, a large movement of soybean meal out of Canada to the U. K. and a large import of soybean meal into Canada from the United States also on a duty free basis.

Price support. The growers' board is responsible for the present price support of $2 per bushel in that soybeans were not part of the government's price support program when implemented.

Representations are made to government each year in an effort to gain support for a sound pricing system for soybeans. The government has paid out a 19¢ deficiency payment to every grower for the 1958 crop.

The board office keeps a record of every producer's sale of soybeans and since the advent of deficiency payments in 1958 has kept a record of the price of each sale so that the government of Canada can determine the average price paid to producers and thereby compute the amount of deficiency payment to be made to each producer.

Up to the present time the administration of the price support program and the distribution of the deficiency payments has been done by our organization for the federal government.

Tariffs and import restrictions. Our growers are presently very dissatisfied with prices around $1.90 for soybeans in Ontario and noting that imports of soybeans and products amount to $47 million, naturally look to some form of quota or tariff restriction to bolster the domestic price.

Naturally producers are interested in net returns from crop production. Our directors are constantly being pressured to obtain whatever measures are necessary to improve these net returns. The decline in price the past 5 years seems entirely unwarranted to us. Our prices are set on the price at which duty-free soybeans and meal can be imported into Canada from the United States.

Price support mechanisms can be of assistance if established at sufficiently high levels. This seems to be very difficult to accomplish, mainly due, we believe, to the willingness of American growers to sell soybeans at present prices. Our government cannot help but look at your prices when setting our supports.

We have been studying the tariff question very seriously and must agree that the present tariff of $1.20 on a bushel of soybeans entering the United States and $6 a ton on meal is justified to keep some foreign country from dumping similar products on the U. S. market.

Under price support legislation in Canada quotas on imports of soybeans and meal could be established but with our present expanding market in Canada this seems unrealistic. We need your soybeans and meal.

In summary, soybean growers in Ontario, Canada, are organized from the grassroots and financed by an equal levy on every grower; there are no free riders.

In conclusion, may I say that the close affiliation between the American Soybean Association and ourselves is deeply appreciated. We have worked with you for many years as fellow producers and if it is your pleasure we hope this relationship may continue.

Bickford, Well-Known Oil Chemist, Is Dead

DR. W. G. BICKFORD, a research chemist well known for his outstanding contributions to knowledge of the chemistry of vegetable fats and oils, died suddenly in New Orleans, La., recently at the age of 53.

He was a member of the research staff of the Southern Utilization Research and Development Division of the U. S. Department of Agriculture.

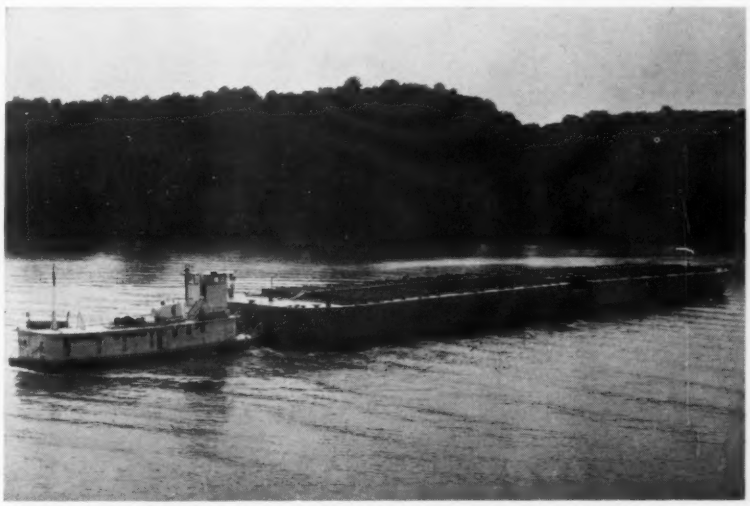
Dr. Bickford's distinguished career as a research scientist began when he entered the federal service in 1936 at the U. S. Soybean Industrial Products Laboratory of the USDA at Urbana, Ill. His earliest work in the Department was largely pioneering investigations into the flavor stability of soybean oil, and his findings have been applicable to many other vegetable oils.

He became a member of the staff of the Southern Regional Research Laboratory in New Orleans when it opened in 1941.

Yeast-Soybean Granules Developed on Taiwan

TAIWAN technologists recently developed a new product—yeast-soybean granules—said to be the first special ingredient for making soy sauce, according to Food Engineering.

The granules enrich the sauce, and cut down on the manufacturing cost.



ONE OF the specially designed barges of American Mineral Spirits Co.

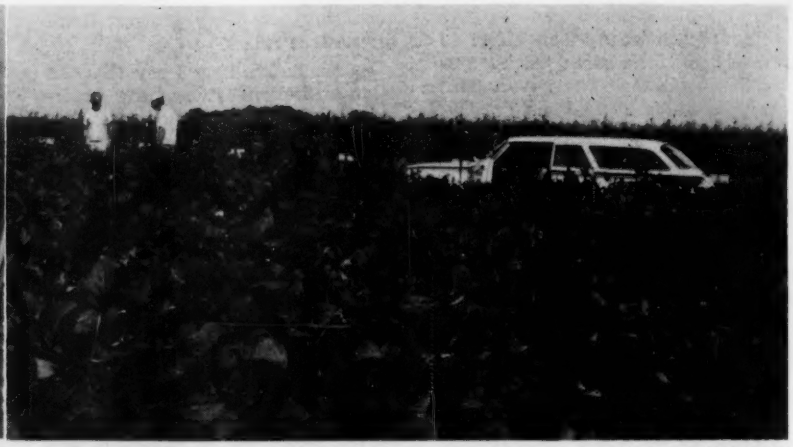
Barge Tow For Petroleum Solvents

A UNIQUE barge tow specially designed and equipped to handle petroleum solvents is now being operated by American Mineral Spirits Co., Chicago. To provide customers with solvents these barges are being used exclusively in this service. All barges are constructed in such a way as to permit contamination-free loading and unloading of completely dissimilar solvents.

Amsco solvents are being delivered to inland waterway terminals located at such points as St. Paul, Chicago, Louisville, Cincinnati, St. Louis, Greenville, Miss., and Birmingham, Ala. Deep water terminals at Carteret, N. J., Pensacola, Fla., and Jacksonville, Fla., are served by ocean tankers to complete the nationwide network of 22 terminals.

Combined with the network of terminals and refineries, a fleet of more than 60 transport trucks and several hundred tank cars are maintained to deliver the firm's solvents to the customer's plant for following day delivery. Amsco's storage capacity of petroleum solvents exceeds 42 million gallons.

DRS. DUNLEAVY (left) and Weber examine soybean plant taken from field beside Highway 30 east of Jefferson while farmer watches from car.



Photos by Kent Pellett

WEBER (left) and Dunleavy check soybean plots on Carrington-Clyde Experimental Farm near Independence. Spraying for stem canker tests are under way there.

An Iowa Soybean Survey

IOWA SOYBEANS averaged about 10 days behind normal Sept. 7 and 8, C. R. Weber, Iowa State University agronomist, and J. M. Dunleavy, ISU plant pathologist, noted after a 780-mile survey in all quarters of Iowa except the southwest. They said stage of growth averaged 8.6, with stage 9.3 normal for the date.

The ISU specialists covered 29 of Iowa's 99 counties including the heaviest soybean-producing areas and observed 62 fields. Purpose of the trip was to visit soybean nurseries and to determine condition of commercial plantings as to variety, stage of growth, stand, weed infestation, nodulation, and incidence of diseases.

"Soybean growth in west central, northwest and north central Iowa was most nearly normal. Northeast, east central and southeast portions of the state were most retarded as to soybean development and had poorest stands and most weeds present. Growth has not closed in the rows to form a solid canopy in many fields in retarded areas." Weber and Dunleavy found weed growth heavy in 22% of the fields and stands poor in 11%. Nodulation was poor in 18% of the fields.

"Our yield estimate has not improved since our July survey," they state. "Due to late planting, weeds and possible frost injury in areas of late planting and retarded growth, we anticipate about average yield of 23.4 bushels per acre (1950-59 average)." (USDA Sept. 1 estimate for Iowa was 26 bushels.)

"A few red spider mites were observed mainly in southeastern Iowa. No other insect damage was noted.

"Downy mildew and bacterial pustule were the most frequently observed diseases. These diseases have never been observed to be as prevalent in Iowa as they are this year, with 85% of the fields visited being infected with downy mildew and 68% with bacterial pustule. The increase in downy mildew can be attributed to the frequent dews during the cool nights of the growing season. Downy mildew was general throughout the soybean growing regions of the entire state. Bacterial pustule was most prevalent in the central and northwestern portions of the state.

"These diseases will definitely decrease yields in the areas where they are most prevalent.

"Brown spot was slightly more prevalent than in recent years. Stem canker is building up throughout the state and although it is more prevalent than in the last 2 years, it does not appear that it will be a serious problem over the state as a whole."

Develop Phytophthora Resistance

RESISTANCE TO Phytophthora root and stem rot, a fungus disease of soybeans, is being incorporated into susceptible varieties of soybeans grown commercially in several areas of the United States where the disease is a serious problem, according to the U. S. Department of Agriculture.

Phytophthora root and stem rot attacks soybeans grown in poorly drained, compact soils or in soils on which excessive flood irrigation is used. Since 1951, when the disease was first identified in the United States, it has caused extensive losses in the heavy soil areas of Ohio (and in Ontario, Canada) and sporadic damage in Indiana, Illinois, North Carolina, Missouri, and Mississippi.

The disease attacks soybeans at all stages of growth, from seedling to maturity. It causes internal browning and discoloration of the root and lower stem, and softening of cell structure. In laboratory experiments, death of the plants has followed in 2 to 4 days after infection.

Resistance has been transferred into several previously susceptible varieties by cooperating State-USDA scientists at the U. S. Regional Soybean Laboratory, Urbana, Ill. These varieties are adapted for growth in the north central part of the United States, which produces 80% of the annual soybean crop.

Breeding for resistance in varieties adapted to this and other regions is also being conducted co-

operatively with USDA or by the state experiment stations in Missouri, Indiana, Ohio, and Mississippi.

Source of resistance used in the Illinois breeding work is the variety Blackhawk. The susceptible varieties to which Blackhawk's resistance is being transferred are grown in areas of the north central United States where the disease is a problem and where Blackhawk is not adapted.

Although resistance to Phytophthora root and stem rot is also found in several older types of soybeans, Blackhawk's improved characteristics make it more desirable for use in cross breeding.

In the Illinois work, Richard L. Bernard of USDA's Agricultural Research Service crossed Blackhawk with the susceptible varieties and then backcrossed the progeny that had picked up Blackhawk's resistance with the susceptible varieties. The resistance to root and stem rot was transferred, but other characteristics of Blackhawk were bred out through the backcrosses. The resulting plants, except for their resistance to the disease, are practically identical to their disease-susceptible parents.

Seed for some of the new resistant varieties was produced last summer and used in regional performance tests. Other varieties are less advanced in the backcrossing program and are being improved through further laboratory work. No seed of any of the new resistant varieties will be distributed by the USDA.

New Gasoline Additive From Central Soya Co.

A NEW GASOLINE additive, Centrol S-41-K, has been announced by the chemurgy division of the Central Soya Co., in Chicago, Ill.

Engine research, road tests and commercial usage by a major refiner show that the product provides excellent carburetor detergency and anti-icing, plus serving as a mild rust inhibitor. Centrol S-41-K is a product of soybean lecithin.

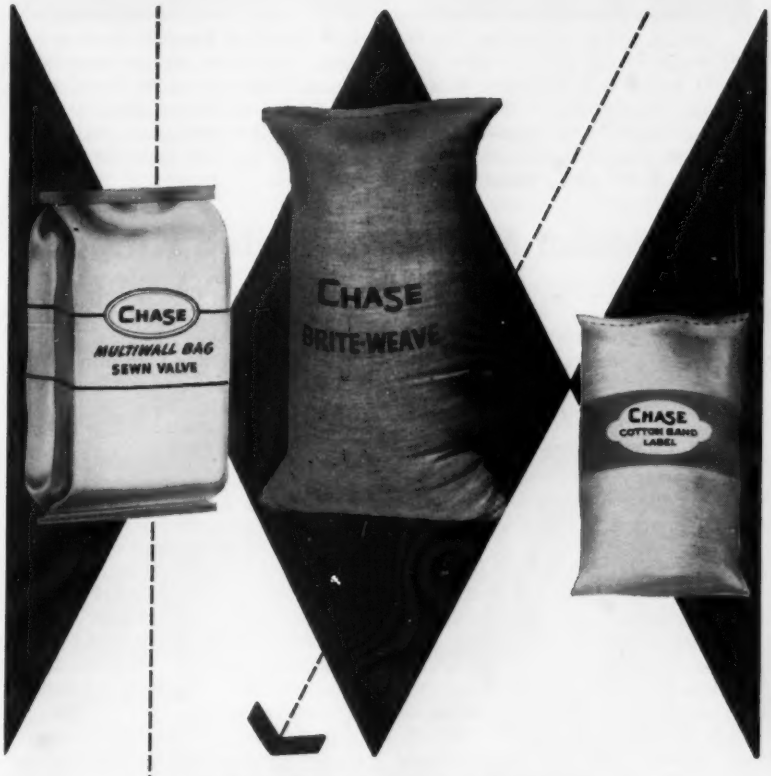
The marketing and performance advantages of anti-icing agents in winter grade fuels are widely recognized by both refiners and gasoline customers. Carburetor cleanliness through the use of special detergents is of more recent origin. Studies of the problem show the deposits are caused by a combination of exhaust, crankcase fumes and dirt in the air feed.

Research and commercial experience have shown that S-41-K can prevent such deposits, which are a major reason for carburetor adjustment and cleaning. Work of this nature represents a large portion of engine service expense.

Error in Production by Italian Food Industry

A REPORT appearing in the News in Brief section of the August 1960 Soybean Digest stating that production of the Italian mixed feed industry doubled in 1 year—from 5 million metric tons in 1958 to 10 million tons in 1959—was in error, according to J. L. Krider, Central Soya Co. vice president.

"To set the record straight," writes Dr. Krider, "it is my understanding that the production of the feed industry in Italy in 1958 was approximately 5 million tons. The tonnage increased to about 6 million tons in 1959, and there is a further increase expected in 1960 due to the expanding poultry industry."



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SONJA SOYA, demonstrator for the Soybean Council of America, offers an hors d'oeuvre made with soya oil to a British trade visitor to the soybean stand in the U. S. exhibit at the British Food Fair. (L to R) Sonja Soya; G. W. Pyatt, British Soya Products Ltd., Puckeridge, Herts; A. D. Donnell, technical consultant, Waterloo, Iowa; F. S. C. Freeman, sales manager, British Arkady Co. Ltd., Manchester; J. M. Muentefering, assistant to the director for overseas operations, Soybean Council of America, Rome.

See Greater Market in United Kingdom

A QUICKENED interest in U. S. produced soybeans—noted for their high oil and protein content—was a matter of general note at the soybean section of the U. S. exhibit in the British Food Fair in London, Sept. 1-17.

U. S. trade officials in charge say the expression of interest in this U. S. exhibit indicates a greater potential market in the United Kingdom.

Processors not only from the U. K. but also from South Africa and Norway conferred with the U. S. trade officials on the merits of U. S. soybeans. Their inquiries were nearly as broad as the soybeans' versatility —ranging from the high qualities of U. S. soybeans for use in flour, oil, and meal; to oil for canning tuna and sardines; and for use in the manufacture of shortening and margarine.

The British trade has expressed a need for more oil for the manufacture of mayonnaise, spreads, margarine and other items of similar nature. U. S. trade efforts in the U. K. are meeting with success in such activities as helping small food manufacturers use soy oil and flour in their products and, generally, to get soya products better known among both consumers and the trade.

Consumer reaction to soya products, such as flour, mayonnaise, salad oils and dressings, and tempting dishes prepared at the exhibit by Sonja Soya, cooking demonstrator, was better than anticipated. British housewives were fulsome in their comments about the health-giving qualities of soy flour because of its excellent protein content. Bread containing soya is also favored by British housewives because of its quality of staying fresh longer.

Specialty foods prepared and served to visitors at the soybean stand brought considerable interest. A Marzipan type (creamed-base confection) of candy was a favorite, and some housewives have indicated their desire to use soya for making Christmas candies.

Industry representatives in charge of the soybean section of the exhibit included J. W. Hayward, director of nutrition, Soybean Council of America, Minneapolis, Minn.; A. D. Donnell, technical consultant, former president of Rath Packing Co., Waterloo, Iowa; J. M. Muentefering assistant to the director for overseas operations, Soybean Council of America, Rome; Sonja Soya, cooking demonstrator.

A highlight feature of soybean activities was a reception given Sept. 8 by Robert N. Anderson, agricultural attache, U. S. Embassy, London, in honor of British soybean processors, importers and distributors.

The U. S. exhibit was the third presented at the British Food Fair by the United States. Previous exhibits were held in 1956 and 1958. The 1960 exhibit is by far the largest and most comprehensive, displaying more than 1,000 different food items.

The exhibit is sponsored by the Foreign Agricultural Service of the U. S. Department of Agriculture with the help of cooperating industry organizations.

SOYBEAN COUNCIL OF AMERICA, INC.

Good Crowds Also at Munich Food Fair

DR. HAYWARD and Mr. Donnell went from London to the Munich Food Fair (IKOFA) in West Germany, which opened Sept. 23 and lasted through Oct. 2.

The fair drew large crowds augmented by the influx of visitors for Munich's famed Oktober-Fest, a traditional festival that ran concurently, according to Mr. Donnell.

Clear evidence of West Germany's prosperous economy and high employment was seen in the tremendous interest in America's so-called "convenience" foods that require less kitchen time.

Long lines of hungry and curious visitors cued up for samples of rice dishes, and to buy fried chicken and turkey sandwiches offered at the poultry exhibit. About 1,500 people clustered around the soya demonstrations of the Soybean Council of America, Inc., where Dr. Hayward and Mr. Donnell were in charge.

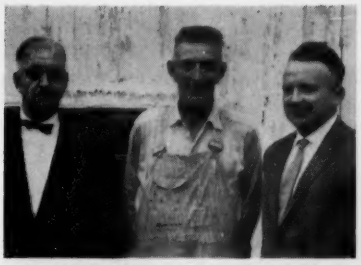
Dr. Josef Wienken, agricultural specialist in the office of the U. S. agricultural attache, stated that Germany's imports of soybeans in 1959 were 1.03 million metric tons at a value of $63.8 million, an alltime record. He said that while Germany may increase production of wheat and other items to reduce imports, soybean imports will probably increase.

* * *

The annual agricultural fair which opened in Salonika, Greece, Sept. 4, drew large crowds, according to Paul Klinefelter, Gladbrook, Iowa, who represented the Council at the fair. The exhibit demonstrated the use of soybean oil and protein to visitors attending the fair.

* * * *

Visitors during September at the Council and American Soybean Association headquarters in Waterloo and Hudson, Iowa, were Mr. and Mrs. Guy Chipperfield of London, England. The Chipperfields arrived in Chicago from Toronto, Canada; and also visited St. Louis, New York City, and Washington, D. C. They were guests of Mr. and Mrs. Geo. M. Strayer and Mr. and Mrs. Howard L. Roach while in Iowa.



ISRAELI visitor G. Zimmerman (right) with Howard L. Roach, Soybean Council president (left), and Wes Fober, manager of one of the Roach farms.

Israel Analyst on United States Tour

G. ZIMMERMAN, chief technician and research analyst of the Israel Institute of Technology, Haifa, Israel, is in this country touring U. S. research organizations. He arrived in mid-September, is spending 4 weeks visiting manufacturing plants and research laboratories at the invitation of the Soybean Council, with which he is cooperating in research on isolated soy proteins and fats in Israel.

While in this country Mr. Zimmerman is visiting a number of soybean processing plants and state universities, the Northern and Western Regional Laboratories of the U. S. Department of Agriculture at Peoria, Ill., and Berkley, Calif. He will also visit Washington, D. C., and New York City to discuss with USDA officials and trade representatives the export of U. S. soybeans and soybean products to Israel and their utilization by that country.

All Council Officers Reelected in Chicago

ALL OFFICERS of the Soybean Council of America, Inc., were reelected at the annual meeting in Chicago Sept. 13. They are:

Howard L. Roach, Plainfield, Iowa, president.

David G. Wing, Mechanicsburg, Ohio, vice president.

R. G. Houghtlin, Chicago, Ill., secretary.

Chester B. Biddle, Remington, Ind., treasurer.

Geo. M. Strayer, Hudson, Iowa, executive director.

New members of the board of directors are Hubert Baker, Dalton City, Ill.; and Glenn Pogeler, Mason City, Iowa.

* * * *

The Council went on record opposing government classification of U. S. soybeans as surplus and their distribution in exchange for soft currencies and/or foreign credits "under present conditions and for the foreseeable future."

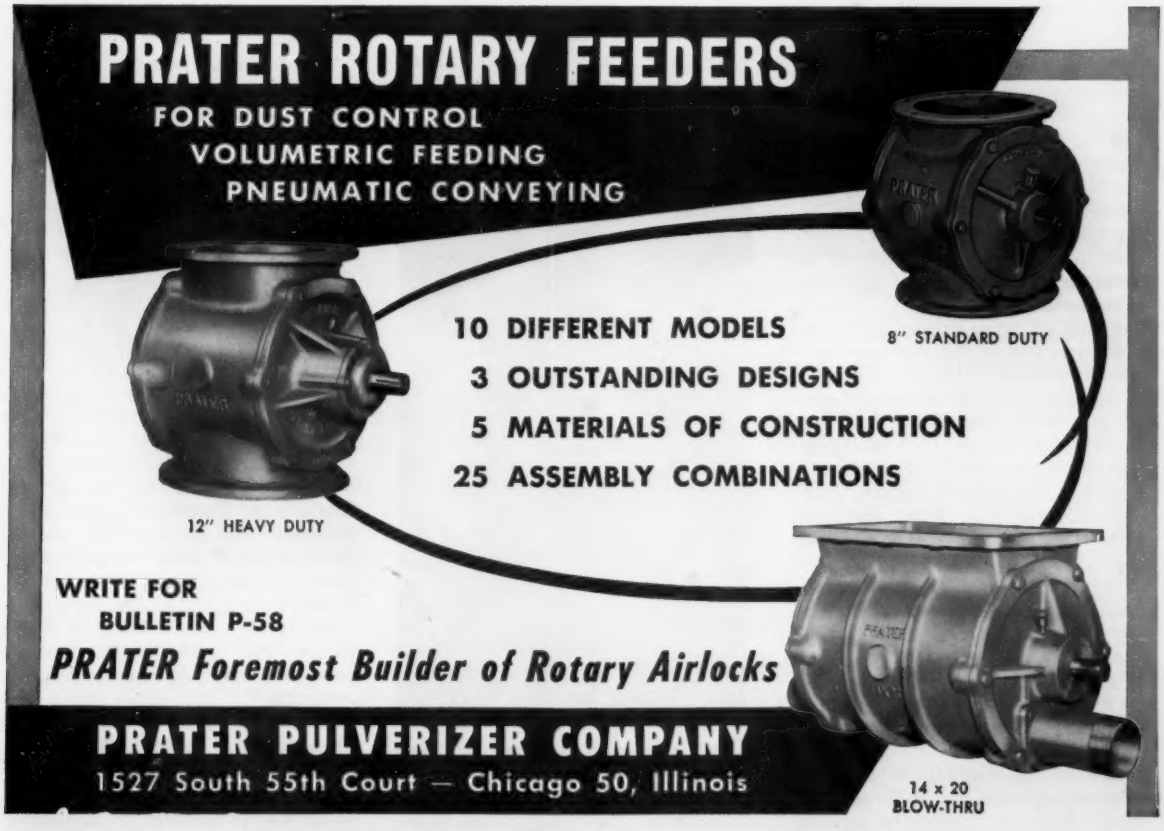
The Council will use its influence in every way possible to minimize trade restrictions throughout the world which limit the sale of and markets for U. S. soybean products.

* * * *

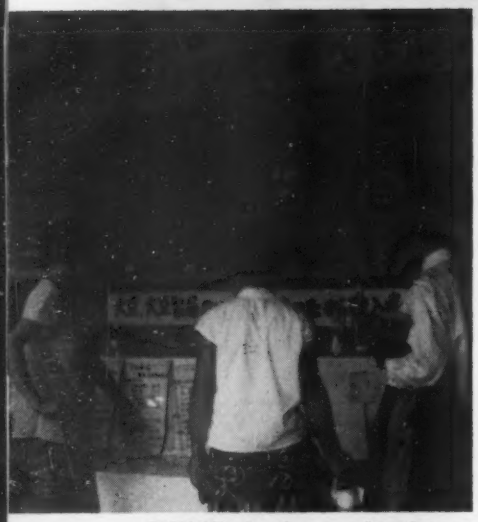
Animal Nutrition Symposium in Madrid

AGRICULTURAL scientists, industry and government representatives from Europe and the United States will meet in Madrid, Spain, Oct. 19-22 for the second international symposium on animal nutrition, sponsored jointly by the Soybean Council of America and the U. S. Feed Grains Council.

Dr. James W. Hayward, nutrition director for the Soybean Council, has been named permanent secretary of the symposium. The Council's president, Howard L. Roach, and Bob Fischer, assistant to the president, will attend the symposium.



JAPANESE-AMERICAN SOYBEAN INSTITUTE



DISPLAY of soybeans and products at the Nagaoka City fair. The sign reads, "Let us eat more soybeans."

Promotional Activities In Northern Japan

By SHIZUKA HAYASHI

Managing Director, Japanese American Soybean Institute, Nikkatsu International Bldg. No. 1, 1-Chome Yurakucho Chiyoda-Ku, Tokyo, Japan

LOWELL S. HARDIN, Purdue University professor, was appointed by Foreign Agricultural Service to conduct an overall evaluation of U. S. market development projects in Japan including soybeans, wheat, tobacco, cotton, and tallow.

During the recent visit by Dr. Hardin, the Japanese American Soybean Institute arranged a trip to the northern area of Japan to offer him a chance to review some of the promotional activities carried out at the grassroots under our market development project.

The trip was made by a team comprising Dr. Hardin; C. M. Elkinton, agricultural attache, U. S. Embassy; Mrs. Yamamoto, chief of the Home-Living Improvement section, Ministry of Agriculture; Miss Sato, chief, Home-Living Improvement Research Institute; Mrs. Shimizu, agricultural section, International Cooperation Administration; and staff of the Institute.

Arriving at our destination and ushered in by the prefectural officials, we inspected the Agricultural Fair which ran for 5 consecutive days.

One of the 3-day mobile exhibitions of soybeans and soybean products, which was covered by our contract with Mrs. Yamamoto's section of the Ministry of Agriculture, was conducted during the fair. Panels explaining the nutritional values of soybeans and soybean products were displayed in the "Health and Living Hall." An attractive display was prepared to show changes in food and living habits. One side of the room was devoted to soybeans and soybean products with a big sign, "Let us eat more soybeans!" Various food dishes prepared by using soybean oil and other soy products were displayed on one of the tables.

The team spent the night at a hot springs at a typical Japanese hotel. Hot springs in Japan are very popular and are visited all through the year for recreation and recuperation. It is quite an unusual experience for foreign visitors.

The following day was a big one for our soybean program with a cooking contest under the guidance of Mrs. Kagawa, president of the Girls Nutrition College. Sixteen groups competed in preparing dishes using soybeans and soybean products. Contest regulations called for materials costing under 18¢, the cooking to be completed within 30 minutes. The dishes were judged on balanced nutrition, speed of preparation, taste and appearance.

A meeting was held in another hall to report experiences of dietary improvement by farm wives, with an audience of about 1,500. Mr. Elkinton made a short speech. He said, "What you eat determines what you are."

THIS OLD MAN came on foot from the country to the meeting. Sedge hat, leggings, and luggage on his back are typical traveling style of the old days.

Approximately 213,000 visited the agricultural fair. After spending a night at Niigata City, an hour's drive from the fair, we continued the trip farther north to Fukushima City, about another 5 hours' journey.

The soybean oil cooking contest under contract with the Oil and Fat Manufacturers Association was held in Fukushima City with more than 400 women attending. In spite of the hot day all the participants eagerly watched the demonstration and listened to the lecture given by Mrs. Kondo, a well-known nutrition leader.

Late that evening we came back to Tokyo.

AMERICAN SOYBEAN ASSOCIATION

Japanese Soy Sauce Team in United States

A GROUP of the top executives of the Japan Soy Sauce Brewers Association is making a 36-day tour of the U. S. soybean industry as guests of the American Soybean Association. The trip was arranged by the Japanese American Soybean Institute. The soy sauce manufacturers are traveling at their own expense, however.

The team arrived in Waterloo, Iowa, Sept. 25 and will leave the United States in late October.

While in the United States they are visiting farms where soybeans are grown and harvested, and U. S. elevators and soybean processing plants; the Northern Regional Research Laboratory at Peoria, Ill.; grain grading and export facilities; and the U. S. Department of Agriculture in Washington, D. C.

The team from Japan includes: Keizaburo Mogi, managing director, Noda Shoyu Co., Ltd.; Yoshiro Hamaguchi, managing director, Yamasa Shoyu Co., Ltd; Kichiemon Hamaguchi, president, Choshi Shoyu Co., Ltd., and Mrs. Michiko Hamaguchi; Motoyoshi Kinoshita, president, Marukin Shoyu Co., Ltd.; Heibei Yamashita, president, Kinoeno Shoyu Co., Ltd.; Chujiro Yamanouchi, vice president, Japan Shoyu Association, and president, Kyushu Shoyu Association; and Akira Komiya, managing director, Japan Shoyu Association.

The team will be accompanied on their tour by David R. Farlow, assistant to the executive vice president of the American Soybean Association.

CROP REPORT

Late Start for the 1960 Soybean Harvest

SOYBEAN HARVEST was 1 to 2 weeks late in northern areas and the usual heavy late-September harvest movement did not develop. Early reports on the harvested crop indicated a wide variation in condition and yield.

U. S. Department of Agriculture as of Sept. 1 estimated the national crop at 566.3 million bushels, up 18.4 million from the Aug. 1 estimate. The estimated Sept. 1 yield is only 13.4 million bushels under the record 1958 crop. The estimated 24-bushels-per-acre yield is the same as last year. The increase in the Sept. 1 crop estimate was attributed to favorable conditions in August.

C. M. Galvin of Francis I. duPont & Co. estimated the crop at 562 million bushels as of Sept. 1.

Local reports by Soybean Digest correspondents:

Arkansas. Jake Hartz, Jr., Jacob Hartz Seed Co., Stuttgart (9-20): Maturity 6 days later than normal. Need rain on late planted beans. Uneven maturity may cause trouble. Rice country free of weeds but cotton area will have trouble. Our estimate for this area 21 to 21.5 bushels per acre. Plenty of storage. No grain on farm and lots of commercial storage available.

Florida. E. N. Stephens, county agent, Pensacola: Maturity of crop normal, condition good, moisture sufficient. Combining begins at normal time Oct. 1. Yield outlook good.

Illinois. John H. Butterfield, Pana (9-19): Maturity 8 days late. Hot weather damaged early beans more than late ones. Harvest began Sept. 17. Yield 20 to 25 bushels, moisture 12%, weedy unless recleaner used.

Indiana. J. B. Edmondson, Danville (9-20): Maturity very uneven from dead ripe in some fields to still green in others. Crop condition about 95% of normal due to mixed maturity, weeds, disease, etc. Lack of moisture has not generally handicapped crop. Weeds big factor in some areas, especially smartweeds. Rains stopped early movement. Moisture 11%-14% with good quality. Yields 30 bu. up. I still believe USDA too optimistic in yield per acre and total yield.

Louisiana. Mark H. Brown, Lake Providence (9-19): Good crop, near normal maturity. Harvest started on early beans Sept. 14. Weeds and grass will be a problem in several fields. Yield good but not enough yet to tell. Most will be sold as it comes in.

Missouri. Carver Brown, Laddonia (9-19): Maturity of crop week late. Have had 40 days without rain. Harvest began Sept. 10, 25% combined to date. Yield average 20 bushels, quality good, moisture low, foreign material above normal. 2 weeks of hot dry weather after Sept. 1 cut yields 5 bushels per acre.

Ohio. D. G. Scott Farms, Marysville (9-19): Dry hot weather has made maturity date about as usual. More weeds than usual. Yield about as USDA's Sept. 1 estimate.

G. G. McIlroy, Irwin (9-17): Maturity has been hurried up by dry, hot weather. Few beans have been combined. Judging from my observations and farmer talk this community will have lowest per acre yield in 10 years. Early harvested beans have been of poor quality. Some rotten and some very small.

Virginia. Jacques Gutelius, Nansemond Grain & Supply Corp., Driver (9-17): Maturity normal. Bug situation not too good. Dusting and spraying needed. Some acreage flooded from hurricane Donna. Weeds numerous because of recent rain. Yield should be above normal due to favorable growing conditions.

SOYBEANS FOR BEANS

Crop production, September 1960
Crop Reporting Board, AMS, USDA

	Yield per acre			Production		
	Average 1949-58	1959	Indicated 1960	Average 1949-58	1959	Indicated 1960
	— Bushels —			— 1,000 bushels —		
N. Y.	16.4	16.0	17.0	103	64	68
N. J.	19.7	26.0	26.0	640	1,144	1,118
Pa.	17.9	23.0	22.0	376	414	374
Ohio	23.0	26.0	26.5	26,686	38,272	41,340
Ind.	23.4	26.0	27.0	44,327	60,112	65,367
Ill.	24.6	26.5	26.0	103,099	125,610	128,050
Mich.	21.0	24.0	24.0	3,164	5,400	5,736
Wis.	15.0	18.5	16.0	975	1,758	1,472
Minn.	19.0	19.0	19.5	34,660	41,667	40,540
Iowa	23.2	26.5	26.0	48,770	63,441	66,612
Mo.	20.0	23.0	23.0	31,870	52,210	56,373
N. Dak.	13.7	13.0	11.5	1,314	3,029	2,438
S. Dak.	14.3	11.5	14.5	1,954	1,576	1,522
Nebr.	21.3	26.0	28.0	2,484	3,900	4,480
Kans.	12.4	21.0	22.0	4,756	9,114	11,462
Del.	17.8	22.5	23.5	1,825	3,442	4,277
Md.	18.6	20.5	22.0	2,480	4,202	5,280
Va.	18.4	20.5	22.0	3,682	5,966	6,710
N. C.	17.8	22.0	24.0	6,114	9,592	12,336
S. C.	12.5	16.0	17.5	2,307	5,920	7,892
Ga.	11.4	16.0	17.0	633	1,392	1,462
Fla.	19.9	23.0	25.0	496	1,058	1,075
Ky.	18.6	24.0	24.0	2,435	3,768	3,864
Tenn.	18.7	22.5	23.0	3,934	7,132	7,728
Ala.	19.4	22.5	23.0	1,833	3,150	3,358
Miss.	16.7	23.0	22.0	8,540	20,769	20,262
Ark.	18.5	24.5	23.0	19,581	56,791	57,040
La.	18.2	24.0	23.0	1,436	3,312	3,496
Okla.	12.6	21.0	22.0	544	1,428	2,420
Texas	[1]20.3	29.0	28.0	244	2,262	2,184
U. S.	21.3	24.0	24.0	361,270	537,895	566,336

[1] Short-time average.

Says We Have Just Been Piddling Around

SMALL GRAIN industry leaders from three states were told at a recent meeting at Greenville, Miss., that they could boost the area's economy by improving harvesting, storage and marketing of its No. 2 crop—soybeans, according to Feedstuffs.

"Soybeans rank next to cotton in Mississippi and Arkansas and Louisiana, too, I'm sure," L. H. Moseley, district extension agent, told the 78 persons attending the meeting.

"We have just been piddling around on harvesting, storage and marketing," he added. "When we decide to quit treating soybeans like a stepchild we'll get somewhere with this crop."

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, JULY 2, 1946 AND JUNE 11, 1960 (74 STAT. 208) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF

The Soybean Digest published monthly at Hudson, Iowa, for October 1, 1960.

1. The names and addresses of the publisher, editor, managing editor, and business manager are:

Publisher: American Soybean Association, Hudson, Iowa.

Editor: Geo. M. Strayer, Hudson, Iowa.

Managing Editor: Kent Pellett, Hudson, Iowa.

Business manager: Geo. McCulley, Hudson, Iowa.

2. The owner is: The American Soybean Association, Hudson, Iowa, an educational organization operating under the Iowa law as a corporation not for profit, of which no individual or member owns or holds more than 1% of the stock.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: 6156.

GEO. M. STRAYER,
Editor

Sworn to and subscribed before me this 20th day of September, 1960.

[SEAL] GEO. McCULLEY,
Notary Public.

(My commission expires July 4, 1963.)

PUBLICATIONS

How to Reduce Combining Losses

CLEMSON COLLEGE agricultural engineers made a study of soybean harvesting losses in South Carolina during the harvest season. The study included observation of 62 combines scattered over the upper Coastal Plains where most of the state's soybeans are grown.

They say practically all cylinders observed on the combines could have been run somewhat slower to cut down on seed damage without appreciably increasing loss of unthreshed seed.

Another common misadjustment was at the cleaning shoe. Although few combines were losing appreciable seed over the shoe, a number were running excessive seed in the tailings, usually because of the sieve being closed too much.

In many cases, better cleaning shoe adjustment was needed and would have eliminated much trash without increasing seed loss.

Straw choppers on some machines were doing an excellent job and were leaving the fields in an ideal condition for plowing. Other machines were depositing the strawrack discharge in piles and were creating difficulty in plowing.

In many fields plows were following immediately behind the combines so that grain could be planted as soon as possible.

The authors note that South Carolina is now fairly well supplied with current model combines including many self-propelled machines which are becoming very popular in the upper coastal plains. Soybean harvesting across the state has become a modern efficient operation.

Soybean Harvesting Losses in South Carolina. By J. K. Park and B. K. Webb. Circular 123. Clemson Agricultural College, Clemson, S. C.

There Are Advantages in Early Morning Combining

GETTING UP at 6 o'clock in the morning and starting to combine is a successful way of reducing harvest loss. Not only can you save more beans by early morning harvesting, but you can finish the job sooner by harvesting more acres per day. Of course, the cylinder speeds must be adjusted because of the effects of dew.

All-night harvesting can be done for the dew effects are generally more pronounced at sunrise.

Ohio research this fall will prove the worth of a new type of reel which should help to reduce shatter losses. In addition, devices to maintain the proper height of cut are being installed on experimental combines to test their value.

For your harvesting this fall, your best approach for reducing losses comes through careful adjustment and operation of your machine.

Reduce Soybean Harvest Loss! Ohio Farm and Home Research, July-August 1960, pages 52, 63. Ohio Agricultural Experiment Station, Wooster, Ohio.

Larger Crop Means More Downy Mildew

INCREASED SOYBEAN production in the United States has brought soybean fields much nearer to one another, with a consequent more rapid spread of downy mildew. With increased production there is also the possibility of two or more races occurring in the same area.

There is a great need for more exact information on identity of different races of Peronospora Manshurica, the causal agent of the disease, in the various soybean-producing regions of the country so that breeding for resistance to downy mildew can proceed on a more sound basis.

Physiologic Specialization in Peronospora Manshurica (causal agent of downy mildew of soybeans). By Don F. Grabe and John Dunleavy. Phytopathology, Vol. 49, No. 12, pages 791-793, December 1959.

Prices Paid by Indiana Elevators

SOYBEAN PRICES paid by several Indiana country elevators and four processing plants during the 1957 harvest season differed because of variations both in quoted prices and discounting from quoted prices.

On most days quoted prices differed 2¢ to 4¢ per bushel among country elevators in Grant, Jasper and Hancock counties. The extreme difference was 6¢. No one elevator within a given county consistently paid the high or low daily price.

Within given localities, elevator selling prices differed as much as 5¢ per bushel. Average soybean margins at country elevators in Jasper County ranged from approximately 4¢ to 6¢ per bushel; in Grant County, 7¢ to 9¢; and in Hancock County, 9¢ to 10¢.

Discounting variations caused larger price differences within geographic areas than did variations in quoted prices, unless the soybeans were relatively free from foreign material.

There were two main sources of discounting variations: grading and sampling. These variations were larger at country elevators than at processing plants.

Soybean Pricing and Grading at Indiana Country Elevators and Processing Plants. No. 700. By Monte E. Juillerat and Paul L. Farris. Department of Agricultural Economics, Purdue University Agricultural Experiment Station, Lafayette, Ind.

Increased Use of Salad Dressing, Mayannaise

SALAD DRESSING, mayonnaise, and related products continue to have a growing appeal for the American palate, and with new uses developing, per capita consumption in 1959 jumped to a new high — 6.1 pints—up .3 of a pint from 1958, the Business and Defense Services Administration, U. S. Department of Commerce, reported.

The annual report, "Salad Dressing, Mayonnaise, and Related Products, 1959," prepared in BSDA's Food Industries Division, also showed production at a record high of 134 million gallons valued at $245 million compared to 126 million gallons valued at $238 million in 1958. Production in 1959 was up 7% over 1958, continuing a 13-year trend.

Salad dressing, mayonnaise, and French dressing continued to be the top items in the field.

Soybean oil was again the principal oil used in the products, accounting for 68% of the total. Cottonseed oil usage increased by 1.6% of the total, reversing a downward trend. Corn oil was used in smaller quantities.

Copies of *Salad Dressing, Mayonnaise, and Related Products, 1959,* may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., or from Department of Commerce field offices. Price 20¢.

Protein-Rich Soy Flour by ADM

A NEW protein-rich soy flour that may eventually lead to entirely new and cheaper foods has been developed by Archer-Daniels-Midland Co.

ADM said the new flour, designed as a health-building supplement for existing foods, contains 50% to 55% protein. The soybean, from which it is derived, is one of nature's best sources of balanced, highly nutritious protein for human consumption.

Designated Ardex 550, the ADM product is neutral in taste and odor, according to James Meier, manager of the company's Prochem division.

The new product, which takes ADM further into the specialty food field, will be followed by others which the company's laboratories now are developing for this vast market, Meier said.

Because in Ardex 550 the distinctive taste of the soybean, a quality that has limited its use in American foods, is virtually eliminated, the new product can be given any desired flavor. It imparts no taste or odor to any food to which it is added.

When used in bakery products, the new ADM soy flour provides additional protein at low cost and enhances the "freshness" and crust color of breads, cakes, rolls, yeast raised sweet goods and cookies. It also can be used in dry baking mixes.

Because of its high quality protein content Ardex 550 is perfectly suited as milk protein replacement and also complements the proteins found in wheat flour. In a commercial bakery test, 3% of Ardex 550 substituted ideally for 4% of milk solids in white bread at a cost saving of 55%.

The ADM soy flour retards "staling" in baked goods while improving texture and toasting quality. It makes doughs easier to handle and bread doughs more compressible. In doughnuts, Ardex 550 reduces grease absorption.

The new ADM product improves the firmness, texture and taste appeal of canned and frozen macaroni products. These take on the appearance, firmness and taste appeal of freshly baked casserole dishes.

Ardex 550 also keeps foods firm and fresh looking far longer on the steam table, an important benefit to school lunchrooms, restaurants and other institutional facilities. This was demonstrated in school lunch tests where consumers preferred the body, texture, and taste of macaroni and spaghetti dishes prepared with Ardex 550.

The ADM soy flour also is an efficient, economical supplement for such foods as soups, baby foods, and prepared meat products.

Grain Shipments from Port of Chicago Down

DIRECT overseas grain shipments from the port of Chicago are falling behind last year's pace, according to Nick Poulos in the Chicago Tribune.

Unless a marked improvement develops, it appears that 1960 shipments will amount to about 10 million bushels compared with 14.6 million bushels in 1959, when the St. Lawrence seaway was opened, according to Poulos.

It is pointed out that the 21-foot depth of the harbor channels at Chicago limits the amount of grain ships can take on.

We started this job 36 years ago ...and it may not be finished yet!

Originally built in 1924, Ralston Purina's 600-ton-per-day feed plant in Kansas City has been enlarged and expanded nine times, the most recent addition being 835,000 bushels of grain storage.

All building work, including the original mill, warehouse, and offices, was designed, engineered and constructed by our organization.

Our engineers approach each job with the same "eye-to-the-future" thinking and experience. We would like to apply it to the design, engineering or construction of your next job, too. It can save you money and increase operating efficiency of your grain storage, feed plant, flour mill, or similar facility.

wh

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New Responsibilities To ADM Vice Presidents

Assignment of new responsibilities to two vice presidents of **Archer-Daniels-Midland Co.** was announced by E. A. Olson, executive vice president-agricultural group.

Carl C. Farrington, who has been manager of ADM's grain division, was named to the newly created position of vice president of the agricultural group.

Carl Farrington

Ralph Bruce

Ralph Bruce, manager of the oilseeds division, succeeds Farrington as manager of the company's grain operations except those on the Pacific Coast.

Farrington's new responsibilities will include coordinating the agricultural group's contacts with federal and state governments, public groups and trade associations, developing plans for the agricultural group and its divisions, and special attention to transportation problems for the group.

Bruce has been manager of ADM's oilseeds division which includes the company's soybean and linseed operations, for the past year. Prior to that he was manager of the linseed division.

He is president and a director of the Vegetable Oil Export Corp., treasurer and a director of the National Flaxseed Processors Association, and a director of the National Soybean Processors Association.

Fred C. Olson has been appointed manager of all coarse grain operations for Archer-Daniels-Midland Co., with responsibility for the acquisition and merchandising of soybeans, flaxseed, corn, oats, rye, and screenings. He will handle exports as well as domestic phases of ADM's operations in these various commodities.

Fred C. Olson

Olson came to ADM last December as manager of linseed operations. One of the most widely known figures in the flaxseed industry, his entire business career has been in the grain and allied industries.

Shepardson Retires From Simon-Carter Co.

Simon-Carter Co., Minneapolis, announces the retirement of Hill Shepardson from active service with the company as of Sept. 1. Mr. Shepardson has a record of almost 30 years' service with Simon-Carter and its predecessors, the Carter-Mayhew Manufacturing Co., and the Hart-Carter Co. in sales management, sales promotion, and advertising. He is widely known in the industries served by this firm.

E. O. Anderson

Although Mr. Shepardson is retiring from active service, he will be available as a consultant. Mr. and Mrs. Shepardson plan to make their home in Clemson, S. C.

Mr. Shepardson's previous duties will be assumed by E. O. "Link" Anderson under the supervision of M. L. "Maury" Olson, general sales manager. Mr. Anderson has served Simon-Carter and its predecessor company for 11 years, and has approximately 20 years' experience in the milling machinery business.

Czichos Marks 45th Year with Swift & Co.

E. F. Czichos, Chicago, has marked his 45th year of continuous service with **Swift & Co.** and received his 45-year anniversary pin. The past 4 years he has been headquartered at the Chicago office as assistant head of the oil mill department.

E. F. Czichos

Mr. Czichos started his career with Swift as a stenographer and scale clerk at the Waco, Tex., oil mill in 1915. He was manager of the Little Rock, Ark., oil mill for 15 years. From 1952 to 1956 he was head of Swift's combined southwestern and southeastern oil mill districts, with headquarters at Memphis.

Contract Will Speed Cargill Grain Exports

Award of a contract for "about a million dollars" to continue modernization of **Cargill, Inc.'s** 2-million-bushel export grain elevator at Toledo, Ohio, was announced.

Lee-Emmert, a contracting firm headquartered in Richardson, Tex., was the accepted bidder.

The contract includes five 95-foot steel loading towers and high-speed belt conveyors to move grain within the elevator, from elevator to dockside and for 340 feet along the row of towers. The loading equipment, all of it remotely controlled, will be able to spout 50,000 bushels an hour into the holds of the largest lake and ocean vessels able to operate in the St. Lawrence seaway.

Joseph Johnson of Spencer Kellogg Dead

Joseph E. Johnson, 64, a former manager of the soybean oil meal

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"35 YEARS IN ST. LOUIS"

department of **Spencer Kellogg & Sons, Inc.**, died recently at Ormond Beach, Fla.

Mr. Johnson joined Spencer Kellogg in 1928 and during his 23 years with the company filled many responsible positions.

In 1935 when Spencer Kellogg & Sons entered the fast growing soybean industry, Mr. Johnson was assigned the responsibility of organizing and heading a newly created soybean division in Chicago. Later he was transferred to Decatur and then promoted to the home office at Buffalo as manager of the soybean oil meal department. He retired in 1952.

Mr. Johnson was active in the National Soybean Processors Association in the infancy of the soybean industry.

Liggett to Special Soy Products Section

The appointment of James L. Liggett to the special soya products' technical sales and service organization in Chicago has been announced by the chemurgy division of **Central Soya Co., Inc.**

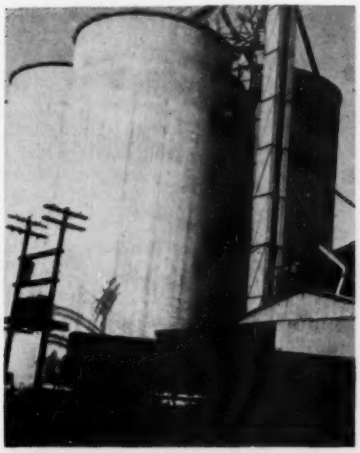
Liggett will work with the food trade in the application and marketing of Central Soya's edible soya products, which include soya flour, soya grits, high protein soya products, isolated edible soya proteins and lecithin.

Prior to joining Central Soya, Liggett was chief chemist with Zion Industries.

Central Soya also announced the promotion of William G. Eichar to technical sales and service, handling Chemurgy's complete line of edible and industrial soya products in the central states.

Eichar joined Central Soya in 1954 and was a salesman in the lecithin department until his promotion.

New Soybean Storage At Dyersburg, Tenn.



EIGHT SOYBEAN storage tanks of Farmers Grain & Soybean Co., Dyersburg, Tenn. The six concrete and two metal tanks have a total storage capacity of 400,000 bushels. James Ozment and Ed Davis are owners.

R. J. Brown Adds Million Gallons to Storage Space

T. M. Scherer, chairman of the board of the **R. J. Brown Co.**, has announced the acquisition of land, buildings and tanks adjacent to Brown's present facilities in St. Louis.

This newly purchased property adds approximately 1 million gallons of additional storage space and will be used to accommodate an expanded line of petroleum and chemical solvents. The new facilities also permit receiving barge deliveries.

The two-story offices, located at 1430 S. Vandeventer Ave., will enable the consolidation of the executive offices and other departments formerly in other sections of St. Louis. The phone number remains JEfferson 1-0840.

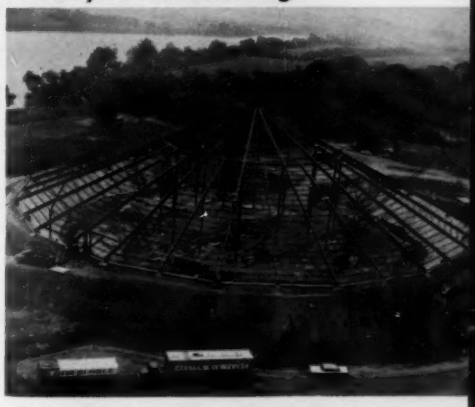
Gene W. Fowler, director of advertising and public relations for **Archer-Daniels-Midland Co.** for the past 10 years, resigned from that position effective Sept. 1. He has been active in nationwide promotional programs for the many industries ADM serves.

John A. Copp has been named manager of **Cargill, Inc.'s** soybean processing plant at Washington, Iowa. He replaces Hugo Lensch who retired recently after 14 years with the firm. Mr. Copp joined Cargill in Minneapolis in 1955.

Four major appointments in the sales organization of McMillen Feed Mills, division of **Central Soya:** E. E. Reynolds, director of feed sales, has been appointed director of marketing; L. H. Higgins has been named general sales manager; E. P. Kovats will become manager of dairy feeds; and Frank K. Dalrymple has been named manager of commercial accounts.

Merle Altstiel has been named district sales manager of the southwestern sales district of **McMillen Feed Mills.** The district includes all or parts of Arkansas, Mississippi, Louisiana, Oklahoma, Texas, and Missouri. He will be located at Memphis, Tenn.

Central Soya Adds New Facility at Chattanooga



CONSTRUCTION of Central Soya's new 2-million-bushel bulk storage facility at its Chattanooga, Tenn., plant was making rapid progress and was scheduled for Oct. 1 completion. The new structure is 300 feet in diameter with dike wall sides. An overhead belt conveyor delivers soybeans to the unit which contains a tunnel discharge at the bottom for removal of soybeans.

"Soybeans," an article appearing in September 1960 **Lykes Fleet Flashes,** tells about production, uses of and markets for the U. S. soybean crop, including the export programs of the American Soybean Association and the Soybean Council of America, Inc.

"Cargill's Golden Beans," is an account of the processing operations of **Cargill, Inc.,** at Norfolk, Va., in September 1960 Esso Oilways.

Douglas O. Fleming has been promoted to assistant to the general sales manager of McMillen Feed Mills, a division of **Central Soya,** Fort Wayne, Ind. He has been staff assistant to the director of feed sales in Fort Wayne.

Purchase by **Cargill, Inc.,** of a 55,000-bushel grain elevator at Belhaven, N. C., has been announced. The elevator, leased and operated by Cargill since 1954, was owned by Pungo Grain Co., Belhaven. Largest volume grains through Belhaven include soybeans.

The U. S. Department of Agriculture has announced appointment of Clarence R. Eskildsen, Karlstad, Minn., as agricultural attache at Bonn, West Germany. He succeeds Phil S. Eckert. Mr. Eskildsen has been agricultural attache at New Delhi, India, since 1957. Major U. S. agricultural exports to West Germany include soybeans.

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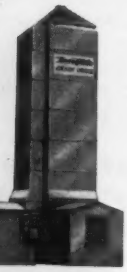

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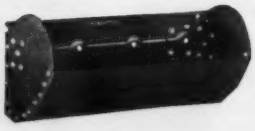

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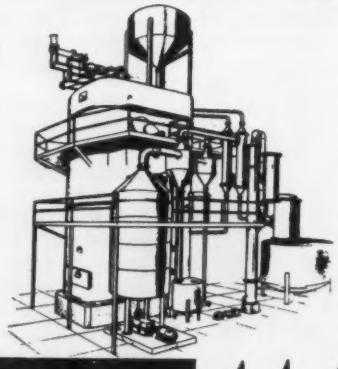
The country's leading processors of oil seeds have specified French Solvent Extraction Equipment again and again because of its versatility—ease of operation — economy — efficiency — safety — and finer and more profitable end products — all at no extra cost.



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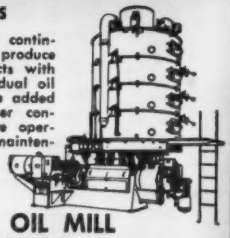
High capacity French continuous screw presses produce highest quality products with exceptionally low residual oil in meal . . . plus the added benefits of low power consumption and full-time operation with minumum maintenance.



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- Valves
- Pumps
- Accumulators

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NEW PRODUCTS and SERVICES

ELEVATORS, MILLS. Design and construction of grain elevators, feed and flour mills, and similar facilities are featured in a new 40-page booklet recently published by Weitz-Hettelsater Engineers.

More than 20 such facilities are illustrated and described, including those designed and constructed for General Mills, Pillsbury Mills, Ralston Purina, and other major processors.

Also included is a complete description of Weitz-Hettelsater services to the grain and feed trade and the story of their development over the past 40 years.

For copies of this booklet write Soybean Digest 10d, Hudson, Iowa.

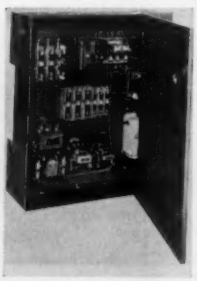
CHECKS TESTERS. A completely new, fast and simple method of accurately checking Steinlite moisture testers in the field is announced by Seedburo Equipment Co. This major development will permit Steinlite owners to almost immediately determine the condition of their testers.

Previously Steinlites in the field were checked with grain samples. The new method uses a material that flows like grain. It provides a much more satisfactory test medium than grain samples. The material will be shaped into pellets and manufactured under the name of Steinlite Test Pellets.

The pellets can be used on the following Steinlite models: type 105-S and D units, the 400-G, and the new 500-RC.

For further information write Soybean Digest 10c, Hudson, Iowa.

DRIER CONTROL. An improved operating and safety control system has been incorporated in the new line of Shanzer grain driers.



Major changes include complete pre-wiring into the control panel all drier motor starters and push-buttons along with a fused protection ahead of each motor starter. The unit is also designed with a main entrance safety disconnect switch.

The company pointed out that factory pre-wiring of electrical components will afford substantial savings to the customer through reduced field wiring costs.

For further information write the Soybean Digest 10b, Hudson, Iowa.

PROBE. Burrows Equipment Co. announces a new three-section probe designed for sampling boxcars. The probe is designed for use in limited working space where there is little or no head room. The main section is first inserted into the grain, the handle is removed and the extra extension is screwed on to the main section, making an overall length of 96 inches.

For further details write Soybean Digest 10a, Hudson, Iowa.

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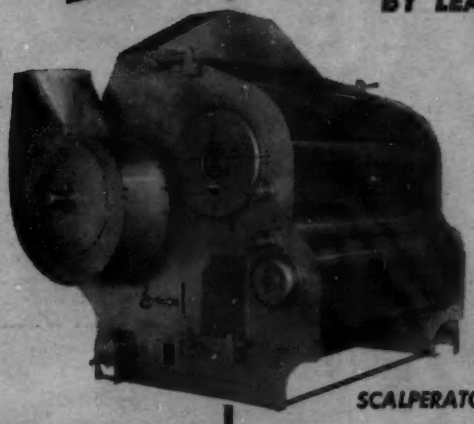
BY LEADING HANDLERS AND PROCESSORS

OF SOY BEANS



SCALPERATOR

FIRST SCALPING AND ASPIRATION

The Carter Scalperator does a good job of rough scalping *and* aspirating beans going directly to storage. It removes both coarse and light foreign materials. It also is a valuable machine to use on beans or grains when turned for cooling. Note that the Scalperator can be used on other grains without change of equipment. In capacity this is a "fast" machine. The Scalperator uses only rotary motion, thus does not vibrate.

The Basic Unit—Carter "Squirrel-Cage" Scalping Reel. Baffle plate construction retards flow of beans through the reel, insuring thorough rough scalping. The reel is self cleaning.

MILLERATOR

SECOND SCREENING AND ASPIRATION

The Carter Millerator, used before processing the beans, does a refined job of screening and aspirating. Its upper screen removes all material that is *larger in diameter* than the beans, and much of the material that is *longer*.

Its lower screen removes small seeds and sand. Controlled aspiration effectively removes light foreign materials. The Scalperator and Millerator are all-metal, require low power. Write for complete information . . . today.

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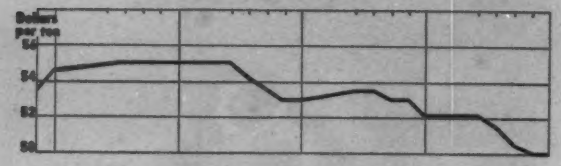
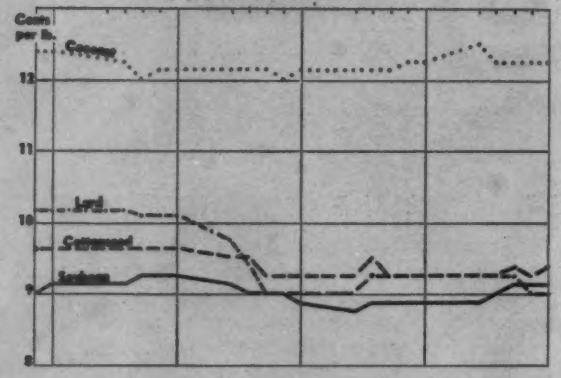
EFFICIENT SCALPING AND ASPIRATION

DAILY MARKET PRICES
No. 1 Cash Soybeans, Chicago

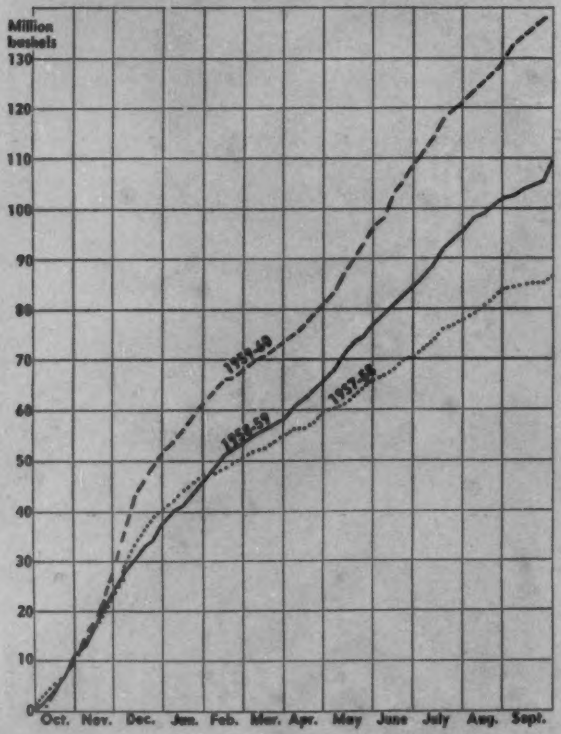
Bulk Soybean Meal, Decatur



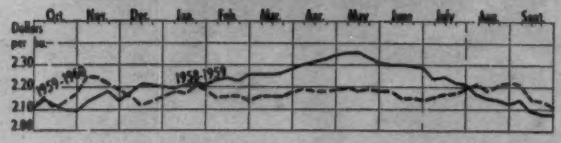
Crude Vegetable Oils and Lard



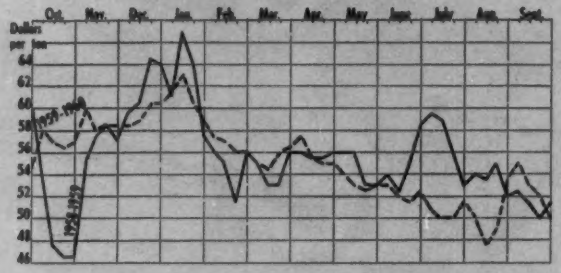
SOYBEAN INSPECTIONS FOR EXPORT, CUMULATIVE YEAR BEGINNING OCT. 1, 1957, 1958, 1959
From Agricultural Marketing Service Reports



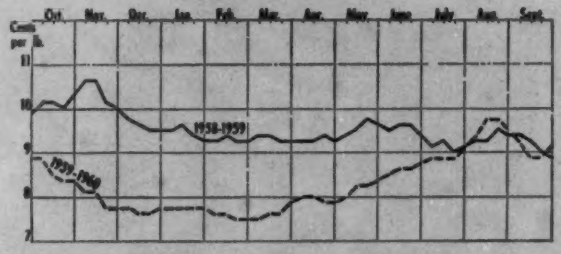
TRENDS AT A GLANCE (Weekly Close)
No. 1 Cash Soybeans, Chicago



Bulk Soybean Meal, Decatur



Crude Soybean Oil, Tankers



CASH PRICES, SEPTEMBER, 1960*

Sept.	No. 1 yellow soybeans Chicago	Bulk soybean meal Decatur	Soybean oil Decatur	Cottonseed oil Mississippi Valley	Coconut oil Pacific Coast	Lard Chicago
1	$2.19½	$53.50	$.09	$.09⅝	$.12⅜	$.1030
2	2.19	54.50	.09⅛	.09⅝	.12⅜	.1030
3	Saturday					
5	Labor Day					
6	2.20¼	55.00	.09⅛	.09⅝	.12¼	.1030
7	2.20½	55.00	.09¼	.09⅝	.12	.1010
8	2.21¼	55.00	.09¼	.09⅝	.12⅛	.1010
9	2.21¼	55.00	.09¼	.09⅝	.12⅛	.1010
10	Saturday					
12	2.17½	55.00	.09⅛	.09½	.12⅛	.0975
13	2.18	54.00	.09	.09½	.12⅛	.0940
14	2.16½	53.50	.09	.09¼	.12⅛	.0900
15	2.15½	53.00	.09	.09¼	.12	.0900
16	2.14½	53.00	.08⅞	.09¼	.12⅛	.0900
17	Saturday					
19	2.13½	53.50	.08¾	.09¼	.12⅛	.0900
20	2.14¼	53.50	.08⅞	.09½	.12⅛	.0925
21	2.14¾	53.00	.08⅞	.09¼	.12¼	.0925
22	2.14¼	53.00	.08⅞	.09¼	.12¼	.0925
23	2.13¼	52.00	.08⅞	.09¼	.12¼	.0925
24	Saturday					
26	2.12¼	52.00	.08⅞	.09¼	.12½	.0925
27	2.12¼	51.50	.09	.09¼	.12¼	.0925
28	2.12½	50.50	.09⅛	.09⅜	.12¼	.0925
29	2.11½	50.00	.09⅛	.09¼	.12¼	.0900
30	2.11¼	50.00	.09⅛	.09⅜	.12¼	.0900

*From Wall Street Journal, Chicago.

1958 AND 1959 SOYBEAN CROPS

	1959-60	1958-59
Soybeans crushed Oct. 1-Aug. 31	365,547,000 bu.	373,765,000 bu.
Exported Oct. 1-Aug. 31	130,766,000 bu.	103,358,000 bu.
Balance on Sept. 1 for processing, export or carryover	72,972,000 bu.	95,673,000 bu.
Total soybeans inspected for overseas shipment including lake shipments to Canada Oct. 1-Sept. 23	137,171,548 bu.	107,965,172 bu.

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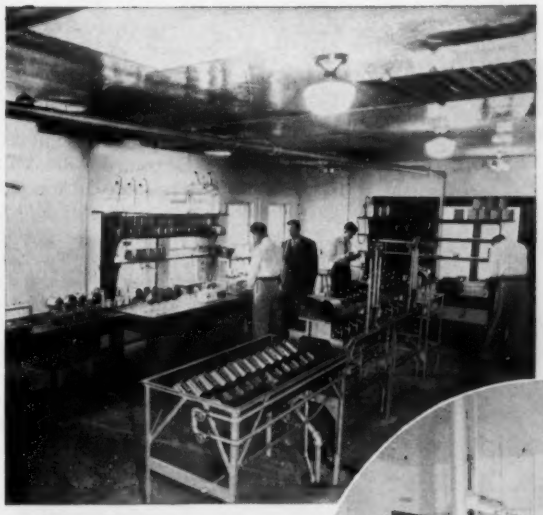

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WASHINGTON DIGEST

By GEORGE PETER

Look for More Price Variation in 1960-61

SOYBEAN SUPPLIES overall prospects have shifted from "tight," as viewed on a statistical basis a month ago, to "in close balance," which means just about right for probable demand as USDA sees it.

USDA has firmed up its ideas on such earlier "iffy" questions as export demand, price, crushings and the overall picture in its first issue of "The Fats and Oils Situation" since the start of the new season.

Fats, Oils Down Slightly

Soybeans and soybean oil will be on a market this new season in which the total U. S. supply of edible fats, oils, and oilseeds is estimated at 14.1 billion pounds, 0.1 billion pounds under the record of the year just ending.

In the bird's-eye view, exportable supplies of all fats should balance export demand about as follows: Less lard and maybe fewer soybeans will more than offset the small increase ahead for cottonseed oil and butter. U. S. consumption of food fats is to increase by 0.1 billion pounds. With 0.2 billion pounds less than available for export last year, the total quantity—edible oils, lard and soybeans—will be down but still nearly as large as the record 3.8 billion pounds shipped abroad the past year.

Soybean Supply

Including carryover of about 30 million bushels, soybean supply is estimated at 595 million bushels or a bit over, close to the record 600 million bushels for the 2 previous years.

Carryover questions are easy to answer this year. Of the expected 30 million, 9 million bushels are in CCC, which won't be on the market for some time. The remainder isn't enough to worry about.

Crushing the coming year is not expected to vary much from the 395 million bushels USDA now figures for the past year. This should produce about 4.3 billion pounds of oil and 9.3 million tons of meal. The strong domestic and export demand for oil is expected to help keep crushings up to last year's level.

Domestic demand for soybean meal and oil are both expected to increase, but, overall, the increase in meal may offset a decline in exports. Higher hog prices, a bigger spring pig crop, more cattle on feed, some increase in broiler production, increased demand for livestock products, more meal at lower prices to stimulate feeding—these are factors expected to boost demand for meal for the year ahead.

Soybean exports should at least equal the record 138 or more million bushels now estimated for the outgoing year. Western Europe, Japan and other major importing countries continue to need large imports of U. S. oilseeds as well as oilseed production. U. S. beans will again be competitively priced in world markets. Dollar supplies abroad are also increasing.

Based on early season forecasts of crushings and exports and seed and feed requirements, USDA sees the

INCREASE SOYBEAN HARVESTS 5 WAYS:

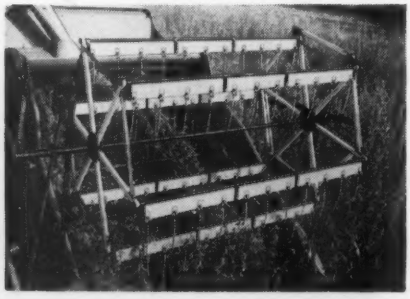
HUME PICK-UP REELS

1 Reduce bat-shatter: The narrow edge of Hume hardwood bats enter beans vertically, reducing pod-shatter of flat-bat entry.

2 Reduce sickle-shatter: Continuous lifting action of Hume pick-up "fingers" keeps beans moving back off cutter-bar.

3 In weedy beans, volunteer corn and weeds are folded down and fed evenly into machine. Stops messy reel-tangling.

4 In lodged beans, coiled, spring-steel tines reach down and lift up soybeans, which otherwise would be lost.



5 Most important: Beans, down between rows, are picked-up ahead of cutter-bar.

Fits all makes and most models of self-propelled and pull-type combines. Excellent for use in small grains, too.

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Mendota 99, Illinois

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Implement Sales Co., Inc. Decatur, Ga.

Indiana Farm Bureau Co-Op Assn., Inc., Indianapolis, Ind.

King Sales Co., Memphis, Tenn.

Kling Equipment Co., Cedar Rapids, Ia.

Lindsay Brothers Co., Minneapolis, Minn.; Des Moines, Ia.; Sioux Falls, S.D.; Omaha, Neb.; Fargo, N.D.; Mason City, Ia.

Maumee Valley Seed Service, Inc., Fort Wayne, Ind.; Columbus, O.

Mid-Continent Sales, Inc., St. Louis, Mo.

Midland Implement Co., Billings, Mont.

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A. R. Thorell Supply Co., Stuttgart, Ark.

White's Incorporated, Houston, Texas

Wis. Tractor & Equip. Co., Fond du Lac, Wis.

soybean carryover on Oct. 1 of next year as around 25 million bushels.

Prices More Variable

With soybean supplies so close to demand, and CCC expected to hold its small stocks, there is no chance of higher priced government stocks affecting the market this season. As a consequence, there will be more seasonal variation in price.

The average price to farmers may be as high as the $1.97 per bushel received for last year's crop. After the fall harvest decline, prices should increase seasonally. There is expected to be less holding in expectation of price recovery.

Edible Oil Exports Bullish

Exports of cottonseed and soybean oils under P. L. 480 are expected to reach 875 million pounds, or up 25% over the past year. About half of the increase is going to Spain, contradicting earlier reports that her olive crop would be larger. Program exports to Poland, Pakistan, and the UAR are also expected to be up over last year. Iran and India will be taking P. L. 480 oil for the first time. Greece may be a new outlet for P. L. 480 oil since her olive oil production will be down. Some of the increase will be partly offset by smaller shipments to Turkey.

Oil exports for dollars will also continue high but stiffer competition is expected from other oil and oilseed producing countries.

Soybeans for Peace

New factors entering the picture next year to increase soybean and oil prospects are the various Food for Peace programs. At this stage they are incapable of economic analysis, but government and industry men are keeping a sharp eye out for developments.

Both candidates and both parties in the election are pledged to stepped-up Food for Peace, Freedom from Hunger, and domestic food stockpiles as improved defense measures in fighting the Cold War.

"Ramshackle" Storage

"Ramshackle" storage for Commodity Credit Corp. stocks of all kinds will have to go, according to House government operations committee plans. Contrary to the general assumption, the committee hasn't dropped its probe of CCC operations.

If, and when, the committee puts over its plans, operators of less than up-to-date facilities may have to go in for renovation, construct new storage, or take a chance on losing government business.

USDA Announces 1960-61 Soybean Sales Policy

THE U. S. DEPARTMENT of Agriculture has announced the sales policy for Commodity Credit Corp.-owned soybeans during the October 1960-September 1961 period.

Beginning Oct. 1, and through May 31, CCC-owned soybeans will be sold at the market price but not less than 105% of the 1960 county soybean support price plus carrying charges. Charges to be added include a 5¢-per-bushel receiving charge and a monthly charge of 1.65¢ per bushel to cover storage (1.11¢) and interest (0.54¢).

The 1.65¢ charge, which is cumulative, will be added to the minimum price each month beginning Oct. 1.

The county support rate for grade No. 2 soybeans at the point of storage will be used in determining the minimum price. Value of any transit billing will be added. Market discounts for quality factors will apply.

During the June-through-September-1961 period, the minimum sales price for CCC-owned soybeans will be not less than 105% of the current support price. Specific pricing details will be announced prior to that time.

Following is the schedule of monthly charges that will be added to 105% of the county soybean support price to determine the minimum price: Oct. 1960, 6.65¢ per bu.; Nov. 1960 8.30¢ per bu.; Dec. 1960 9.95¢ per bu.; Jan. 1961 11.60¢ per bu.; Feb. 1961 13.25¢ per bu.; Mar. 1961 14.90¢ per bu; Apr. 1961 16.55¢ per bu.; May 1961 18.20¢ per bu.

- MARKET STREET -

We invite the readers of THE SOYBEAN DIGEST to use MARKET STREET for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here. Rate 10¢ per word per issue. Minimum insertion $2.00.

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ATTRITION MILLS FOR SALE. 2 Strong & Scott 30-inch with two 40 h.p. motors on each, 3/60/220/440-1750 rpm, ball bearing. Low price. Industrial Motor Service, North Tonawanda, N. Y.

SCHUTTE HAMMERMILL NO. 128, type F, ser. 1821482, 3,200 rpm, model 47. Write, phone, Erie Electric Co., Inc., Buffalo, N. Y. Ph: CLeveland 4758.

GRAIN STORAGE AT 18¢ PER bushel in tanks complete in 250,000 bu. capacities. This is storage at the lowest possible cost. Write Allied, 2002 E. 28th, North Kansas City, Mo.

WE MANUFACTURE STEEL ELEvator legs, screw conveyors, pit screws, valves, elbows, piping, collectors, inclosed distributors, etc. Write for catalog and prices. Creamer Sheet Metal Products, London, Ohio.

FOR SALE—ANDERSON Expellers and French screw-presses, cookers, driers, 5-high, 48-inch crushing rolls, 36-inch attrition mills, sewing machines, hammermills, cracking rolls, filter presses. Ray L. Jones, 1923 Hayselton Drive, Jefferson City, Mo.

SOUTH AMERICAN PROJECT. A U. S. soybean farmer is sought as a partner to grow 5,000 tons of soybeans. He should contribute know-how and some capital or equipment. TE, 31 South St., New York 4, N. Y.

PRATER 75 H.P. DUAL SCREEN pulverizer. Also 100-lb. Richardson meal scale and Union Special 12-inch belt sewing machine. Ray L. Jones, 1923 Hayselton Drive, Jefferson City, Mo.

LOWEST COST BEAN STORAGE. Storage tank, 40-foot diameter by 65 feet high holds over 60,000 bushels at 18¢. Complete with floor. Let us figure with you on low-cost storage. Allied Tank, 1207 Commerce Trust Bldg., Kansas City, Mo. Phone Harrison 1-0282 or Baltimore 1-5789.

FOR SALE—TWO 12-FOOT SELFpropelled I.H. combines; one 12-foot self-propelled Oliver combine; one model 980 Vac-U-Vator grain loader; one 8-inch dia. by 20-foot long screw conveyor 5 h.p.; one 8-inch dia. by 30-foot long screw conveyor 7½ h.p. All above for $8595. New price was $24,500. Parnell & Pritchett, Inc., Box 7742, Princeton, Fla.

MOTORS-GENERATORS. ALL sizes, new and rebuilt. Starters, accessories, pulleys and repair parts. Gear motors. Falk shaft mounted reducers, couplings and V-belt drives. Expert repair service. Nussbaum Electric Co., 220 E. Douglas Ave., Fort Wayne, Ind.

IN THE MARKETS

EXPORTS. Preliminary data on U. S. exports of soybeans, soybean and cottonseed oils, soybean and cottonseed cakes and meals for the month of July 1960, with comparable data for July 1959 and cumulative totals for October-July in the marketing years 1958-59 and 1959-60, from Foreign Agricultural Service, U. S. Department of Agriculture.

	Unit	July 1959	July 1960	October-July 1958-59	October-July 1959-60
Soybeans	bu.	9,850,005	9,209,545	98,136,551	120,404,784
Soybean oil:					
Crude	lb.	96,266,091	43,930,209	339,418,744	482,973,365
Refined, but not further processed	lb.	26,426,403	13,613,512	63,359,762	84,654,526
Refined, deodorized and hydrogenated	lb.	32,693,984	23,038,257	289,516,689	159,132,126
Cottonsced oil:					
Crude	lb.	18,125,708	14,078,415	221,418,385	280,624,556
Refined but not further processed	lb.	35,942,798	5,880,289	85,504,096	140,057,061
Refined, deodorized and hydrogenated	lb.	12,345,206	7,876,873	29,568,711	33,929,402
Cottonseed cake and meal	short ton	50	768	5,195	125,107
Soybean cake and meal	short ton	38,734	31,903	436,255	556,103

Soybean cake and meal: U. S. exports by country of destination, October-July 1959-60 and 1958-59 (tons)

	Oct. 1959-July 1960	Oct. 1958-July 1959		Oct. 1959-July 1960	Oct. 1958-July 1959
Canada	167,444	193,372	Netherlands	71,158	25,791
Mexico	14,335	6,181	Belgium & Luxembourg	58,806	12,425
Cuba	14,572	38,009	France	9,716	—
Jamaica	295	210	West Germany	58,828	8,395
Barbados	270	150	Switzerland	3,518	578
Trinidad & Tobago	336	344	Spain	44,435	20,932
Venezuela	6,685	8,932	Italy	42,698	74,479
Surinam	84	54	Greece	879	1,711
Yugoslavia	3,296	—	Argentina	33	350
Iceland	1,220	720	Philippines	11,528	11,234
Sweden	2,044	50	Japan	495	651
Norway	9,150	18,654	Panama	899	964
Denmark	9,951	8,040	Poland	17,083	—
United Kingdom	1,337	60	Other	3,355	292
Ireland	1,653	3,677	Total	556,103	436,255

Bureau of the Census.

Oilseed cake and meal: U. S. imports, July 1960 (tons)

	Monthly July 1960	Monthly June 1960	Monthly July 1959	Season to date Oct. 1959-July 1960	Season to date Oct. 1958-July 1959	Season Oct. 1958-Sept. 1959
Copra	646	235	1,900	7,095	29,672	30,632
Cottonseed	316	1,060	3,748	30,684	125,511	127,452
All other	50	265	118	2,309	6,083	6,591

Bureau of the Census.

Title I, P. L. 480 export shipments July 1960-August 1960

	August 1960 Metric tons	Unit	Quantity	July 1960-August 1960 Metric tons	Unit	Quantity
Cottonseed oil	5,307	lb.	11,700,000	9,764	lb.	21,525,000
Soybean oil	62,938	lb.	138,755,000	78,781	lb.	173,682,000

Foreign Agricultural Service, U. S. Department of Agriculture.

SUPPLY, DISTRIBUTION of soybeans for the 1956-57 through 1959-60 crop years, from Agricultural Marketing Service (1,000 bushels).

	1959-60	1958-59	1957-58	1956-57
Carryover, Oct. 1	62,390	21,083	9,897	3,731
Production	537,895	579,713	483,715	449,446
Total supply[1]	600,285	600,796	493,612	453,177
Farm use, including seed for season	31,000	28,000	34,000	42,000
Quantity remaining for processing, export, or carryover	569,285	572,796	459,612	411,177
Disappearance, Oct. 1 through Aug. 31				
Crushed for oil or processed[2]	365,547	373,765	328,739	293,705
Exported	[3]130,766	103,358	83,858	80,852
Total	496,313	477,123	412,597	374,557
Balance on Sept. 1 for processing, export, or carryover	72,972	95,673	47,015	36,620

[1] Imports not included because negligible. [2] No allowance is made for new crop crushings prior to Oct. 1. [3] Estimated.

Oilseed meals: Supply and distribution, average 1954-58, annual 1955-59 year beginning October (1,000 tons)

	Average 1954-58	1955	1956	1957	1958	1959[1]
Supply						
Stocks, Oct. 1	255	214	267	332	148	190
Production	10,495	9,926	10,556	10,808	12,285	12,250
Imports	127	104	124	148	162	50
Total	10,877	10,244	10,947	11,288	12,595	12,490
Domestic use	10,113	9,238	10,084	10,825	11,834	11,400
Exports	534	739	531	315	571	800

[1] Preliminary estimates. Agricultural Marketing Service.

Oilseed meals: Production, stocks, foreign trade, and domestic disappearance, October-July 1959-60 and 1958-59 (1,000 tons)

	Stocks Oct. 1[1]	Production	Imports[2]	Exports	Domestic disappearance	Stocks July 31[1]
			October 1959-July 1960			
Soybean	58.5	7,745.2	0	556.1	7,117.2	130.4
Cottonseed	97.0	2,264.6	31.3	125.2	2,077.8	189.9
Linseed	33.3	298.5	2.3	52.6	242.1	39.4
Copra	—	107.9	6.5	—	107.5	6.9
Peanut	1.8	53.9	0	—	50.9	4.8
Total	190.6	10,470.1	40.1	733.9	9,595.5	371.4
			October 1958-July 1959			
Soybean	48.1	8,130.1	0	436.3	7,620.2	121.7
Cottonseed	71.2	1,856.6	125.5	5.2	1,931.8	116.3
Linseed	26.3	344.5	3.5	17.3	344.7	12.3
Copra	0.6	92.5	29.7	—	122.8	—
Peanut	1.5	65.8	0	—	65.1	2.2
Total	147.7	10,489.5	158.7	458.8	10,084.6	252.5

Note: Dash indicates data is not available. [1] Stocks at processing plants only. [2] Partly estimated. Agricultural Marketing Service.

Soybeans: Barge inspected receipts and shipments by Midwest river markets, August 1959 and 1960 (1,000 bu.)

	1960	1959		1960	1959
Receipts					
Chattanooga	—	301	Cairo	61	—
Memphis	40	—	Alton	146	—
Chicago	400	424	St. Louis	314	140
New Orleans	1,986	1,799	Omaha	269	—
Mobile	174	—	Henderson	—	28
Port Allen	671	701	Evansville	24	—
Total	3,271	3,225	Kankakee	407	—
Shipments			Keokuk	40	—
LaCrosse	44	—	Davenport	41	—
Minneapolis	1,730	355	Stoneville	70	84
Peoria	28	—			
St. Joseph	29	—	Total	3,203	2,006

Soybeans: Barge inspected receipts and shipments by Midwest river Markets, July 1959 and 1960 (1,000 bu.)

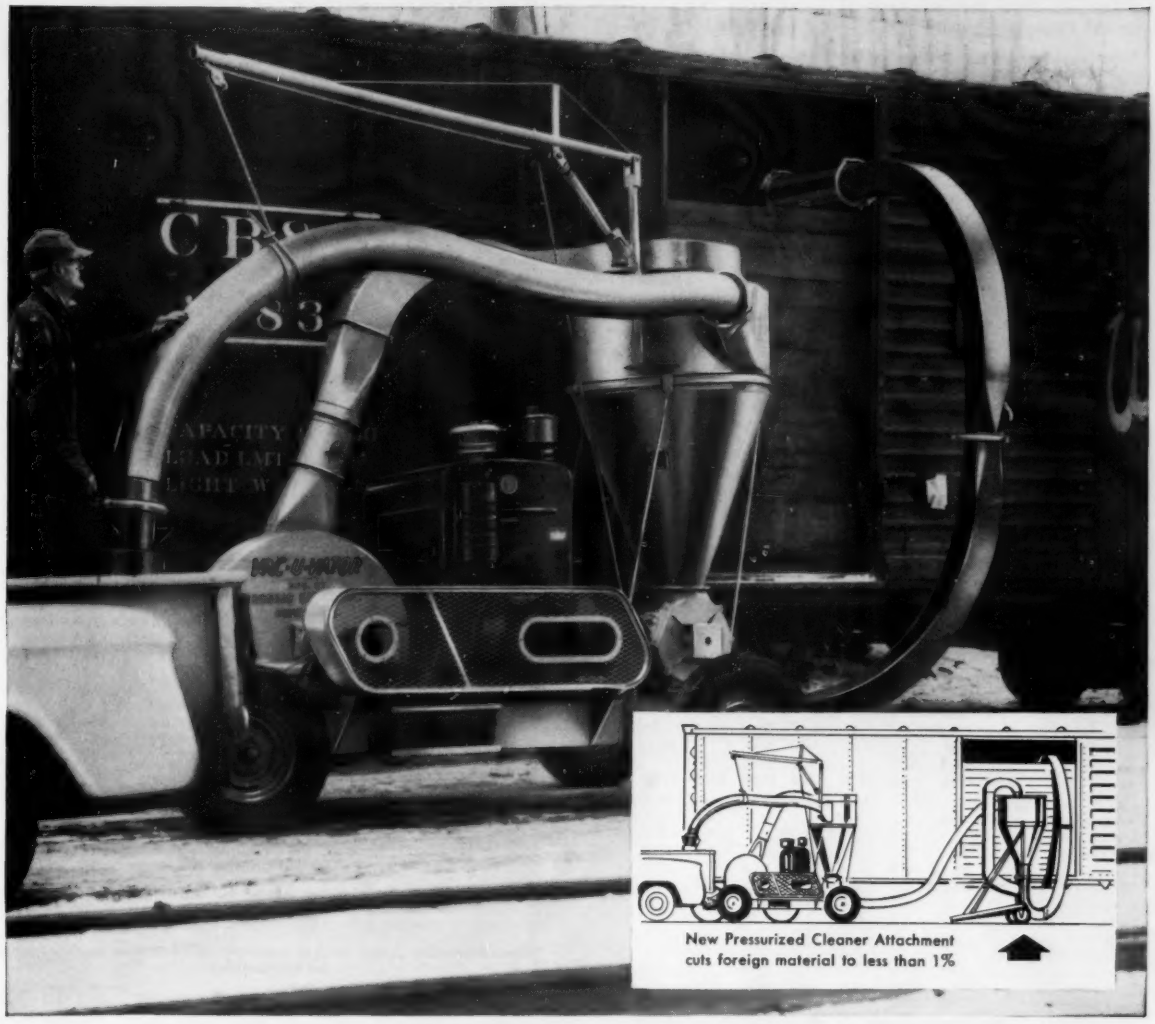
	1960	1959		1960	1959
Shipments			Memphis	46	—
LaCrosse	43	—	Burlington	—	40
Minneapolis	842	1,939	Total	2,133	2,542
Peoria	45	—			
Alton	82	—	**Receipts**		
St. Louis	297	401	Chattanooga	—	650
Omaha	167	—	Chicago	539	1,679
Henderson	45	46	New Orleans	3,527	3,262
Kankakee	344	28	Mobile	373	—
Davenport	40	—	Port Allen	317	657
Kansas City	100	—	Total	4,756	6,248
Stoneville	82	88			

FACTORY USE VEGETABLE OILS for June and July 1960. Reported by Bureau of the Census (million pounds).

Selected edible oils: Production, consumption, and factory and warehouse stocks, July 1960 and June 1960

	July 1960	June 1960	July 1960	June 1960
Production:				
Crude oils	51.3	62.6	350.0	348.6
Refined oils (once-refined)[1]	46.9	*81.3	238.5	303.7
Consumption in refining[1]	49.9	*88.2	250.0	317.9
Consumption in selected edible and inedible products, total[2]	86.9	*103.8	245.5	*303.6
Consumption in edible products, total	86.5	*103.4	227.6	*284.6
Baking or frying fats	22.6	32.2	76.1	114.1
Salad or cooking oil	54.3	60.1	69.8	81.1
Margarine	8.8	9.8	79.7	86.5
Other edible products[3]	0.8	*1.3	2.0	*2.9
Stocks, end of month, total[2]	289.4	*357.6	450.5	*422.6
Crude oils	46.5	*69.8	271.1	220.4
Refined oils	242.9	*287.8	179.4	*202.2

* Revised. [1] Production of refined oils covers only once-refined oil. Degummed soybean oil is reported as crude oil. [2] Includes hydrogenated fats and other fats and oils "in process," (e.g. refined cottonseed includes stocks of stearin). [3] Includes confectioners fats.



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PROCESSING OPERATIONS. Reported by Bureau of the Census for July and August 1960 (1,000 short tons)

Primary products except crude oil at crude oil mill locations: Production, shipments and transfers, and stock, August 1960-July 1960

	Production		Shipments and transfers		Stocks end of month	
	August 1960	July 1960	August 1960	July 1960	Aug. 31, 1960	July 31, 1960
Soybean:						
Cake and meal	742.0	720.8	776.5	708.0	91.0	125.5
Millfeed (hull meal)	10.5	12.6	11.7	11.2	3.7	4.9

Soybeans: Net receipts, crushings, and stocks at oil mills, by states, August 1960-July 1960

	Net receipts at mills[1]		Crushed or used		Stocks at mills	
	August 1960	July 1960	August 1960	July 1960	Aug. 31, 1960	July 31, 1960
U. S.	542.7	666.1	962.0	941.3	597.0	1,016.3
Arkansas	3.5	4.8	23.6	18.0	17.5	37.6
Illinois	219.5	203.7	300.8	281.0	116.6	197.9
Indiana	53.3	76.9	86.6	78.6	42.1	75.3
Iowa	122.7	128.6	171.9	164.9	174.1	223.3
Minnesota	35.0	82.7	68.4	74.1	31.4	64.8
Mississippi	(2)	2.9	(2)	20.0	1.1	8.1
Missouri	(2)	(2)	(2)	(2)	(2)	(2)
Nebraska	(2)	(2)	(2)	(2)	(2)	(2)
North Carolina	(2)	(2)	(2)	(2)	(2)	28.3
Ohio	21.8	76.5	90.9	90.8	48.0	117.1
Tennessee	30.0	45.6	75.7	76.0	49.1	94.9
All other	56.9	44.4	144.1	137.9	117.1	169.0

Note: Detail figures may not add to totals because of independent rounding. [1] Net receipts for each state are derived from the quantity of beans crushed and net change in stocks. [2] Included in "All other" to avoid disclosure of figures for individual companies.

Soybean products: Production and stocks at oil mill locations, by states, August 1960-July 1960

	Crude oil (millions of pounds)				Cake and meal (thousands of tons)[1]			
	Production		Stocks		Production		Stocks	
	August 1960	July 1960	Aug. 31, 1960	July 31, 1960	August 1960	July 1960	Aug. 31, 1960	July 31, 1960
U. S.	358.5	350.0	74.4	135.2	752.5	733.4	94.7	130.4
Arkansas	8.6	6.7	0.9	1.1	18.1	14.0	4.3	5.8
Illinois	115.2	107.3	18.2	35.2	229.5	214.8	26.9	33.6
Indiana	32.6	29.2	(2)	(2)	68.5	60.7	10.1	(2)
Iowa	63.9	60.5	20.3	21.6	138.6	130.1	20.5	21.3
Minnesota	24.6	26.7	4.4	31.0	54.7	59.0	3.7	6.0
Mississippi	(2)	8.1	0.5	1.5	(2)	16.8	2.1	6.0
Missouri	(2)	(2)	0.8	1.8	(2)	(2)	2.0	(2)
Nebraska	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
N. Carolina	(2)	(2)	0.8	1.1	(2)	(2)	1.4	2.5
Ohio	34.6	33.9	7.8	11.4	71.9	71.0	4.8	8.2
Tennessee	27.9	27.9	9.8	9.0	59.4	59.1	6.7	11.8
All other	51.1	49.7	10.9	21.5	111.8	107.9	12.2	35.2

Note: Detail figures may not add to totals because of independent rounding. [1] Includes mill feed (hull meal). [2] Included in "All other" to avoid disclosure of figures for individual companies.

PRICES. Average price for soybeans received by farmers, effective parity, and support rates, reported by Agricultural Marketing Service (dollars per bushel).

Average farm price			Effective parity	Av. price as percent of parity	National average price support rate		
Aug. 15, 1960	July 15, 1960	Aug. 15, 1959	Aug. 15, 1960	Aug. 15, 1960	1960 crop	1959 crop	1958 crop
1.99	1.97	1.98	2.90	69	1.85	1.85	2.09

Average farm and parity prices from crop reporting board.

Soybean prices compared with market value of soybean oil and meal

	Soybean oil: Average price at crushing plant	Soybean oil: Value from bu. of soybeans[1]	Soybean meal: Bulk price at Decatur	Soybean meal: Value from bu. of soybeans[1]	Value of oil and meal from bu. of soybeans[1]	Market price No. 1 yellow soybeans Ill. pts.	Spread between soybean price and value of oil & meal
	Cts. per pound	Dollars	Dollars per ton	Dollars	Dollars	Dollars per bu.	Cents
Aug. 1960	9.4	1.03	50.30	1.18	2.21	2.13	8
July 1960	8.9	0.98	50.75	1.19	2.17	2.09	8
June 1960	8.6	0.95	52.50	1.23	2.18	2.06	12
May 1960	8.2	0.90	54.20	1.27	2.17	2.09	8
Apr. 1960	7.9	0.87	56.50	1.33	2.20	2.11	9
Aug. 1959	9.3	1.02	54.25	1.27	2.29	2.00	29

[1] Based on assumption that a bushel of soybeans yields 11 pounds of oil and 47 pounds of meal. This table is for statistical comparison only. It does not reflect actual operating margins since prices are simple averages and do not take into account location differentials or actual purchases and sales of soybeans, soybean oil or soybean meal.

Oilseed meals: Average bulk prices (dollars per ton)

	June 1960	July 1959	5-year average 1953-57
Prices at principal markets:			
Soybean meal	61.75	68.50	70.70
Cottonseed meal	60.65	67.65	62.00
Linseed meal	64.10	70.05	62.10
Copra cake or meal	70.50	72.75	60.70
Peanut meal	50.00	57.15	60.70
Index of weighted prices	80.4	89.1	88.1

INSPECTIONS. Soybeans inspected by grade and percent, reported by Agricultural Marketing Service.[1]

Grade	August 1960[2]		July 1960		August 1959		Oct. 1959-Aug. 1960		Oct. 1958-Aug. 1959	
	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.
No. 1	4,867	25	5,832	25	3,400	28	75,394	19	91,315	25
No. 2	10,252	54	13,068	56	5,548	46	200,265	52	171,025	48
No. 3	2,449	13	2,932	13	1,973	16	79,388	20	63,528	18
No. 4	1,021	5	1,012	4	872	7	22,955	6	24,390	7
Sample	589	3	346	2	326	3	10,391	3	9,495	2
Total	19,178	100	23,190	100	12,119	100	388,393	100	359,753	100

[1] Carlot receipts have been converted to bushels on the basis that 1 carlot equals 1,750 bushels. [2] Of the August receipts, 900 bushels were black, 1,200 green, and the remainder yellow soybeans. Inspections of soybeans in August included 4,166,982 bushels as cargo lots, 3,079,112 bushels as truck receipts, and the balance as carlot receipts. Based on reports of inspections by licensed inspectors at all markets.

TERMINAL STOCKS. Agricultural Marketing Service's commercial grain stocks reports for close of business on Friday or Saturday preceding date of report (1,000 bushels).

	Aug. 30	Sept. 7	Sept. 13
U. S. soybeans in stock and afloat at domestic markets			
Atlantic Coast	679	553	554
Gulf Coast	1,797	1,183	1,044
Northwestern	2,244	1,607	1,853
Lower Lake	3,206	2,238	2,248
East Central	1,615	1,526	1,105
West Central and Southwestern	2,003	1,873	1,690
Total, current week	11,544	8,980	8,494
Total, year ago	7,097	6,758	6,386
U. S. soybeans in store and afloat at Canadian markets			
Total, current week	448	801	907
Total, year ago	387	288	284
Total stocks in above positions			
Current week	11,992	9,781	9,401
Year ago	7,434	7,046	6,670

Includes all soybeans in public elevators, including government-owned stocks, at 45 principal markets. Does not include stocks in elevators attached to crushing plants, and other processing facilities.

Primary receipts (1,000 bu.) of soybeans at important interior points for week ending:

	Aug. 26	Sept. 2	Sept. 9		Aug. 26	Sept. 2	Sept. 9
Chicago	191	225	127	St. Louis	—	—	4
Duluth	253	492	491	Toledo	8	13	14
Indianapolis	6	—	15	Totals	683	925	869
Kansas City	37	37	17	Last year	695	698	584
Milwaukee	—	—	8	CCC-owned stocks of soybeans in Chicago	629	264	264
Minneapolis	137	101	68				
Omaha	31	39	5				
Peoria	15	16	116				
Sioux City	5	—	4	Total Chicago soybean stocks	3,071	2,188	2,240
St. Joseph	—	2	—				

MELLORINE. Production of mellorine and other frozen desserts made with fats and oils other than milkfat in August, estimated at 5,395,000 gallons, was 14% larger than in August 1959, the crop reporting board reports. Output was 36% greater than the 5-year, 1954-58, average for the month. The cumulative January-August total was 32,945,000 gallons, up 8% from the corresponding period last year and 33% from the 1954-58 average.

Production of "mellorine-type" frozen desserts, United States 1960

	1954-58 average[1]	1958[1]	1959[1]	Estimated 1960	Change from: 1954-58 av.	Change from: 1959
	Thousand gallons				Percent	
January	1,862	2,243	2,273	2,595	+39	+14
February	2,098	2,341	2,464	2,920	+39	+19
March	2,605	2,767	3,360	3,400	+31	+ 1
April	2,900	3,425	3,618	3,915	+35	+ 8
May	3,435	4,120	4,173	4,405	+28	+ 6
June	3,785	4,397	4,850	5,325	+41	+10
July	4,103	4,782	5,034	4,990	+22	— 1
August	3,959	4,475	4,736	5,395	+36	+14
Eight month total	24,747	28,550	30,508	32,945	+33	+ 8

[1] From enumerations.

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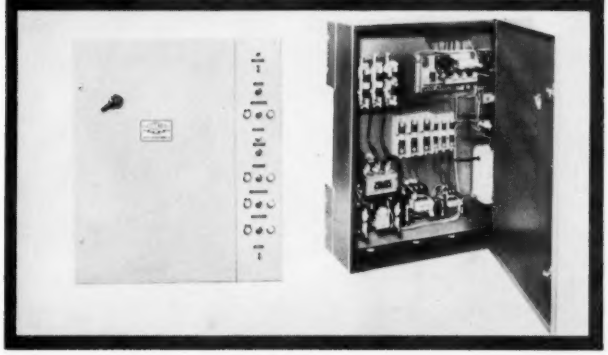

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